TECHNOLOGY DEPARTMENT

NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

EQUIPMENT • IMPROVEMENTS • PROCESSES • MATERIALS • METHODS • APPLICATIONS • LITERATURE

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JUN 8 1949
DETROIT

Vol. 14, No. 6

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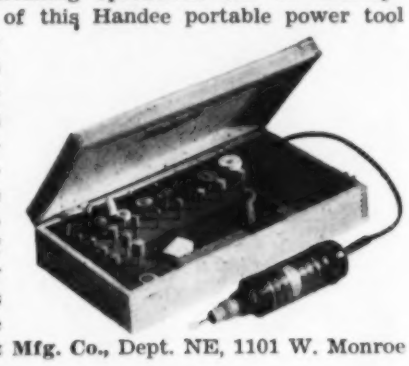
Equipment Digest Publishing Co.

June, 1949

PORTABLE POWER TOOL

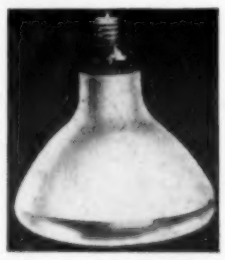
Grinding, drilling, polishing, engraving, cutting, sawing, carving, and cleaning operations can be accomplished through use of this Handee portable power tool kit. Light and compact, tool operates at 25,000 revolutions per minute on alternating or direct current. Polished wooden case houses tool and accommodates 40 of the most popular accessories. Kit lists for $27.50. Made by **Chicago Wheel & Mfg. Co.,** Dept. NE, 1101 W. Monroe St., Chicago 7, Ill.



▲ Mention Item **NED-3800** when writing ▲

INCANDESCENT LAMPS

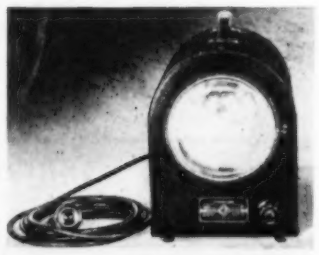
Use of strip frost and filament mount construction reset in bulb at focal point of reflector to give maximum beam candlepower consistent with wide angle distribution are improvement features of 150 and 200-watt R-40 Flurospray lamps. New design gives increase of approximately 12 per cent in this beam candlepower. Ceramic white coating is baked into glass of lamp at high temperatures and insures permanent protection against peeling, running and dampness. Lamps provide concentration of about 75 per cent of light down and 25 per cent in other direction. Applications include installations where no fixtures are used, drop cord service, and use in reflector type fixtures in industrial plants or in bullet type fixtures in displays. Made by **Duro-Test Corp.,** Dept. 15, North Bergen, N. J.



▲ Mention Item **NED-3801** when writing ▲

SLOW-SPEED STROBOSCOPE

Extending stroboscopic method of analysis to low-speed mechanisms, Strobolume high-intensity short flash stroboscope is designed to be flashed from external contactor. This makes it particularly useful where motion to be examined is related to angular position of shaft. Applications of this type include textile looms, printing presses, fuel injection systems and heavy machinery in general. Device will operate continuously at speeds up to 45 flashes per minute; operation for shorter periods is possible up to 1200 flashes per minute. When maximum safe operating time is reached at any speed, circuit breaker opens to turn off power supply.

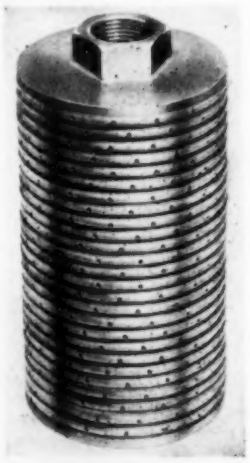


Because of high intensity and short duration of flash, instrument can be used also as light source in high-speed photography where motion of subject is too fast to be stopped by commercial speedlights. Made by **General Radio Co.,** Massachusetts Ave. & Front St., Cambridge 39, Mass.

▲ Mention Item **NED-3802** when writing ▲

FLUID FILTER

Consisting of series of spacers and fine mesh screens or other filtering media, this industrial filter is designed for hydraulic and lubricating oils. Varying mesh of screens can produce any degree of filtration needed between 0.040-inch and 5 microns. Flow rate can be adjusted to each application by varying number of screens and spacers. Cleaning is accomplished with suitable solvent. Screens and spacers can be removed for cleaning, changing or replacement by loosening single nut. Made by **General Filters, Inc.,** 12892 Westwood, Detroit 23, Mich.



▲ Mention Item **NED-3803** when writing ▲

NONSLIP FLOOR COVERING

Applied easily to any type of flooring, Pabco Grip-Tread Mastipave floor covering assures underfoot safety in work areas, corridors, on ramps, stair treads and around machinery. Carrying Underwriters' Laboratories listing, this material features durability, resilience, sanitation, quietness and ease of cleaning. Furnished in 36-inch wide rolls 25 yards long, covering is cemented with fiberized bituminous cement to any clean, dry, smooth floor surface. It is composed of bituminous wearing surface bonded to asphalt treated felt base which is coated on back face with waterproof bituminous material, and it is available in terra cotta, gloss black, green and brown colors.

Water, vermin and rot proof, flooring can be cleaned with mop or by flushing with hose. Self-polishing wax can be used on surface. In event of localized wear, tight patches can be applied easily. Made by **Paraffine Cos., Inc.,** Dept. D, 475 Brannan St., San Francisco 19, Calif.

▲ Mention Item **NED-3804** when writing ▲

FLOOR SWEEPERS

Expedient for cleaning loading platforms, warehouses, hangars, open factory space and other large floor areas, models PSF-49-20 and PSF-49-28 floor sweepers have sweeping widths of 26 and 34 inches with wall brush. Rotating wall brush enables cleaning to the walls. Features of sweeper include high tensile cast aluminum wheels with oilless bearings and with enclosed drive gear cast as integral part of wheel; high tensile powdered iron pinion impregnated with oil; reinforced heavy-wall steel tubing handle; large lightweight aluminum collecting hopper; and three dual brushes. Made by **Parker Pattern & Foundry Co.,** 91 Bechtle Ave., Springfield, O.

▲ Mention Item **NED-3805** when writing ▲

VERTICAL SHAFT TYPE ENGINE

Weighing approximately 35 pounds and developing between 1½ and 1¾ horsepower, model VS-700 four-cycle vertical shaft type gasoline engine can be used to power rotary blade type lawn mowers, jet pumps and similar equipment. Engine is carburetor equipped, employs needle type main bearings, has heavy spring-loaded oil seals, incorporates adjustable air-velocity governor and can be obtained with or without mounting flange. Other features include dustproof and waterproof high voltage ignition for quick starting, oil distributing system with oil level below moving parts and improved scavenging of exhaust gases. Made by **Clinton Machine Co.,** 66 E. Forest Ave., Detroit 1, Mich.

▲ Mention Item **NED-3806** when writing ▲

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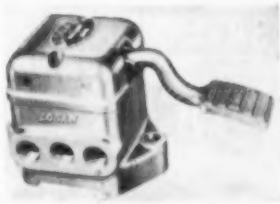
Read Carefully
CHECK AND PASS ON

✓	NAME AND TITLE	SEE ITEM NO.

AIR CONTROL VALVE

Built in ⅜, ¾ and 1-inch port sizes, model 6552 foot-operated four-way air control valve is designed for pressures up to 150 pounds per square inch. Valve body and cover are high tensile cast iron and foot pedal is manganese bronze. All ports and internal air passages are full pipe size to permit unrestricted air flow, rapid response and fast operation. Valve cover can be rotated 90 or 180 degrees to simplify piping problems. When repairing or reconditioning, it is not necessary to remove air lines from valve or disturb pipe connections. Made by **Logansport Machine Co.,** 908 Center Ave., Logansport, Ind.



▲ Mention Item **NED-3807** when writing ▲

Do YOU Know?

■ INSECT cloth known as Star Brand Corronized is reported to be twice as durable as galvanized cloth and priced at approximately half the cost of bronze cloth. It is made in light blue shade. Made by Continental Copper & Steel Industries, Inc., Hanover Wire Cloth Div., Hanover, Pa.

▲ Mention Item **NED-3808** when writing ▲

■ AIR CONDITIONED comfort and protection from flying metal parts are afforded operator of rolling mill by modern pulpits which have 4-inch thick panel type insulated walls and heavy shock-resisting glass windows. Even with 150° F temperatures often encountered in steel mills, pulpit remains comfortable 80° F. Made by Lee Wilson Construction Co., 20005 W. Lake Rd., Cleveland 16, O.

▲ Mention Item **NED-3809** when writing ▲

■ $2250 in prizes will be presented to winners of contest closing July 31, 1949, for papers on designing or redesigning a product for resistance welding, broadening application of this method or research in the field. Contest rules are available from Resistance Welder Manufacturers' Association, 505 Arch St., Philadelphia 6, Pa.

▲ Mention Item **NED-3810** when writing ▲

■ PERMITTING the playing of 78, 33⅓ and 45-revolution per minute records, phonograph motor provides three turntable speeds by ingenious positioning of spindles in contact with idler wheel. Fast speed is secured in conventional manner with rotor shaft directly contacting idler wheel, while for slower speeds, secondary spindles are moved into contact with idler wheel which automatically disengages rotor shaft's contact. Made by General Industries Co., Dept. E, Elyria, O.

▲ Mention Item **NED-3811** when writing ▲

THE WORLD'S GREATEST NAME IN FLOOR SURFACING

..with PLASTIC ROCK

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-safe wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries and railroads.

ASK FOR REPORT 220-D-6

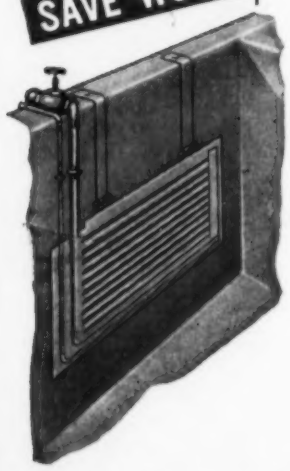
UNITED LABORATORIES, INC., 16804 Euclid Ave., Cleveland 12, Ohio

TESTED APPROVED ULI UNITED LABORATORIES INC.
PRODUCTS AND PROCESSES for PROTECTING PROPERTY
Field Representatives All Over The World

▲ Mention Item NED-3813 when writing ▲

SAVE TIME
SAVE MONEY
SAVE WORK

The new *Udylite* PLATECOIL



● You no longer need to use expensive bulky pipe coils to heat or cool tank solutions. The Udylite PLATECOIL will heat or cool efficiently and economically. PLATECOILS are made by joining two embossed steel plates to form channels for steam, hot water or coolants. They give more rapid heat transfer than pipe coils—are easier installed—cost you less. Available in three metals and two styles—fit into practically every size and type of tank. Write for further information.

- Higher BTU Capacity Per Square Foot of Area.
- Smaller Coil Space—Greater Tank Capacity
- All Welded Seams and Joints
- No Pipe Threads in Solution
- Lower Maintenance and Initial Costs

THE *Udylite* CORPORATION
DETROIT 11, MICHIGAN

▲ Mention Item NED-3814 when writing ▲

AT LAST! A PROFILE PROJECTOR

that practically anyone can use . . . *Easily* . . . *Quickly* . . .

For checking and measuring at different magnifications and illuminations.

Interchanging Parts Done Away with! All Optical Parts Are Built In!

SPECIAL LUMINOSITY FEATURES:

1 Has perfect sharpness of image right into corners of screen.

2 So strong, surface areas show clearly under episcopic illumination on 50 and 100 magnifications.

3 Permits examination and checking of the surface of opaque objects.

Comes complete with objectives for magnifications 10, 20, 50 and 100X.

Also, a graduated rotary screen with hairline cross for degree measurements can be furnished.

←Profile Projector (P 215)

Representing Henri Hauser, Ltd., Bienne, Switzerland.
Extensive line of Swiss Precision Borers, Grinders, etc.
Get illustrated bulletin giving complete details and specifications for this Hauser Profile Projector.

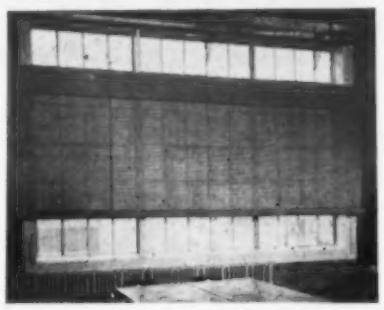
HAUSER MACHINE TOOL CORP.
MANHASSET, N. Y.

MAIL THIS COUPON TODAY Hauser Machine Tool Corp., Dept. N.E.D., Manhasset, N. Y.

Kindly send illustrated bulletin giving complete details of Hauser Profile Projector P 215
Name .....
Address .....
City ..... Zone .... State .....

▲ Mention Item NED-3815 when writing ▲

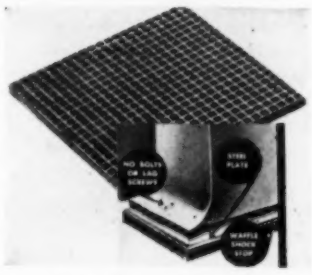
INDUSTRIAL WINDOW SHADE



Since they have top section which can be lowered to admit more light to far corners of wide room, Ra-Tox wood splint ventilating shades are suitable for many industrial applications where it is desired to shut off direct glare and to control amount of incoming light and air. Lowering from top is accomplished by use of horizontal rail which is suspended from top fixture rail with strong wire cables which carry entire weight of shade. Upper portion can be lowered as far as 48 inches from top. When upper section is closed, entire shade can be rolled up from extreme bottom to top, horizontal rail and wire cables rolling up with shade. Made by **Hough Shade Corp.**, 1105 Jackson St., Janesville, Wis.

▲ Mention Item NED-3816 when writing ▲

VIBRATION DAMPENER



Vibrations set up by most types of motorized equipment can be easily isolated by placing Shock Stop rubber vibration dampeners with semipneumatic action between base or feet of equipment and floor or foundation. Tests show that where disturbing frequency is between 1000 and 3000 cycles per minute, reduction in vibrations of from 75 to 90 per cent can be obtained with these stops. They can be obtained in 18 x 18-inch squares for cutting to required size or in rounds of either 2¼ or 3¼-inch diameter. Made by **Connecticut Hard Rubber Co.**, 415 East St., New Haven 9, Conn.

▲ Mention Item NED-3817 when writing ▲

TOILET SEAT STERILIZER

Applying germicidal properties of ultraviolet radiation, Ray-O-Zone utility toilet seat sterilizer provides sanitary and odor-free rest room conditions in wide variety of industrial and commercial establishments. Unit is encased in sturdy steel container that makes it tamperproof. Louver directs rays of 8-watt germicidal tube so as to irradiate seat, bowl and surrounding floor areas. Air which passes through these rays is cleaned also of air-borne bacteria and germs. In operation, tube emits ozone which also helps destroy obnoxious odors. Distributed through **Merchandising Associates**, P.O. Box 411, Lancaster, Pa.

▲ Mention Item NED-3818 when writing ▲

GRC for specialized SMALL injection moldings at Low Cost

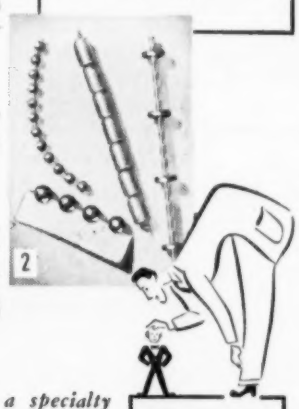
FULLY AUTOMATIC INSERTS

1. INDIVIDUAL INSERTS
Automatic insert feed permits wide variety of product possibilities.

2. CONTINUOUS INSERTS
Small members accurately spaced on tape, cord, wire, chain, etc.

3. INDIVIDUAL PARTS
No limit on smallness! Complete equipment for secondary assembly operations available.

4. SMALL ZINC DIE CASTINGS
Fast, low cost. Quantities from 100,000 to millions.



All Thermoplastics—NYLON a specialty

Maximum size: .03 oz.—1¼" long NO MINIMUM

Write today for Samples and Prices

GRC GRIES REPRODUCER CORP.
82 Willow Ave. New York 54, N. Y.

▲ Mention Item NED-3819 when writing ▲

GRAVITY ROLLER CONVEYORS

THESE 5 FEATURES MEAN MAXIMUM PERFORMANCE

1. Smooth, rolled edges on frame eliminate cuts and torn clothes.
2. Ball bearings are removable for replacement.
3. Hex shafts prevent turning in the frame.
4. The liveliest rolls — the product of correct "balance".
5. 11 types — roll capacities 50 to 150 pounds per roll.

CONVEYOR SPECIALTY COMPANY INC.
37 Newport Ave. North Quincy 71 Mass.

Write today for our complete catalog on Gravity Roller, Belt and Chain Conveyors

▲ Mention Item NED-3820 when writing ▲

New BROWNING FHP BELT

FOR SMOOTH VIBRATIONLESS POWER

★ NEW DESIGN
★ NEW PERFORMANCE
★ LONG LIFE

WRITE FOR CATALOG V-147

BROWNING MANUFACTURING COMPANY INCORPORATED
MAYSVILLE, KENTUCKY, U. S. A.

▲ Mention Item NED-3821 when writing ▲

nyb GENERAL INDUSTRIAL and HEAT FANS

For dust and gas removal, conveying of materials and handling of hot air and gases in industrial processes.

ALL-WELDED CONSTRUCTION

Cast steel spiders, with welded blades. Housings, drives, both pulley and direct, and discharge arrangements to meet any requirement. 13 sizes. Wheel diameters from 14 to 60 inch. All sizes rotatable and reversible. Capacities from 450 CFM to 60,500 CFM.

No. 10 size equipped with manganese bronze wheel as standard. Spark-proof and acid-resistant. For use in hazardous locations where explosive air mixtures are to be handled.

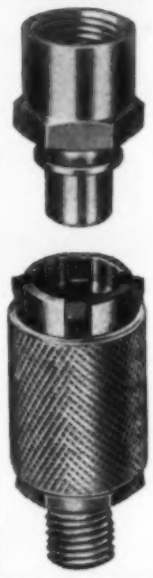
Write for Bulletin 482

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 3170 SO. SHIELDS AVE. • CHICAGO 16
FACTORIES AT LAPORTE, IND. AND CHICAGO, ILL.

▲ Mention Item NED-3822 when writing ▲

At Last! Quick-Disconnect Hose Coupling Guaranteed - - - Positively Leak-Proof!

On "Impossible Jobs" or in hard-to-reach places where ordinary Quick-Disconnect Couplings fail—WIGGINS Inst-O-Matics have made sensational records — yet cost no more!



If you have a hose line that fails to hold under pressure—whether water, air, gas, steam, fluids, hydraulic—we guarantee that a Wiggins Inst-O-Matic Quick-Disconnect Coupling will hold the pressure (and increase flow)! You'll get operation and maintenance savings up to 80% over old-style couplings.

Big firms delighted! We asked for the toughest coupling jobs in these companies—and now we're getting repeat orders! . . . Ford, Chrysler, General Electric, Westinghouse, Inland Steel, General Petroleum, Continental Can, Shell Chemical, Union Pacific Railroad—and scores of others.

Let Us Show You! Wherever you are now using old-fashioned screw-on couplings or any other quick coupling, let us show you how much you can save with Wiggins Inst-O-Matic Couplings, now made in sizes ⅛" to 2½", open and self-sealing, in a variety of metals with Wiggins Quick-Disconnect Couplings. *To Equipment Manufacturers:* Wiggins Inst-O-Matic Couplings are now widely used in special applications by agricultural, automotive, aircraft, heavy industries and on miscellaneous equipment, where performance, flexibility and safety are vital. Address confidential inquiries to Special Equipment Division, E. B. Wiggins Oil Tool Co., Inc., Dept. NED, 3424 East Olympic Blvd., Los Angeles 23, California. Representatives in Principal Cities

¼" Air Hose Coupling

▲ Mention Item NED-3823 when writing ▲

Remember...the new name for the leading brand of mechanics hand service tools is PROTO—formerly Plomb Tools. When you buy PROTO from your dealer, you are getting tools designed and built for professional users. They have the same high quality, long life and superior designs that have made them the choice of professionals for over 40 years under the old brand name.

Write for catalog to

PLOMB TOOL COMPANY

2275J Santa Fe Avenue, Los Angeles 54, California

PROTO Professional Quality TOOLS
REG. U.S. PAT. OFF. LOS ANGELES MADE IN U.S.A.

4982

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NEW PRINCO

DENSITROL*

LIQUID DENSITY INSTRUMENT
APPLIES LABORATORY ACCURACY TO PRODUCTION

NOW a fully dependable liquid density instrument is available designed for rugged production work, yet accurate to laboratory standards. Unaffected by ordinary plant conditions, the DENSITROL* provides continuous indicating, recording and/or controlling of process liquid densities.

Overall density limits of the DENSITROL are from 0.6 to 3.5 d. with spans of 0.10 to 0.005 d. full scale or equivalent. It is available with manual or fully automatic compensation for temperatures up to 200° C. Models are furnished for pressures up to 150 p.s.i.

The DENSITROL is supplied in materials suitable for handling any liquids.

Write for full information today.

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PRECISION THERMOMETER & INSTRUMENT COMPANY
PRINCO
PRECISION INSTRUMENTS FOR INDUSTRY
1400 Brandywine Street, Philadelphia 30, Pa.
In Canada: PEACOCK BROTHERS Limited

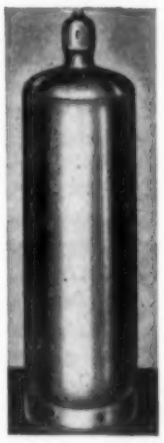
▲ Mention Item NED-3825 when writing ▲

ELECTRIC SOLDERING PLIERS

Employing current-resistance principle which furnishes instantaneous heat, these electric soldering pliers require no tinning, heat elements or tips. Designed for wiring and soldering, pliers are especially adaptable to work on compact assemblies. Wires or parts to be soldered are held by pliers, foot switch is depressed, and wires or parts are heated sufficiently to melt solder. Pliers remain cool at all times and make solder-weld at localized point without heating entire terminal or scorching or shrinking insulation. Tool's effectiveness ranges from 14 to 30-gage copper wire, and it can be used to silver braze small metal parts. Made by **Durst Mfg. Co.**, 11110 Cumpston St., North Hollywood, Calif.

▲ Mention Item NED-3826 when writing ▲

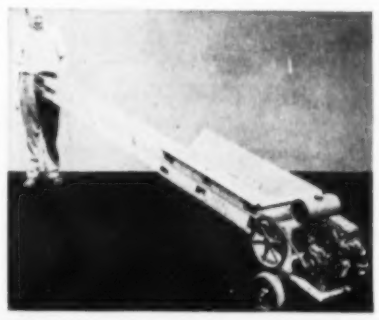
PROPANE CYLINDERS



Constructed of special high tensile strength alloy steel to I. C. C. specifications 4BA-240, this Lite-Weight propane cylinder has 100-pound capacity and tare weight of 72 pounds. Smooth-side construction and lightness in weight facilitate handling and transporting. Of uniform thickness throughout and having high corrosion resistance, cylinders are supplied with or without pressed steel caps and with valve inserted if desired. Because of lightness in weight, cost of transporting cylinders by truck or rail is held to minimum. They are easy to move in, out and around filling plants and warehouses. Made by **Harrisburg Steel Corp.**, 1001 Herr St., Harrisburg, Pa.

▲ Mention Item NED-3827 when writing ▲

COAL CONVEYORS

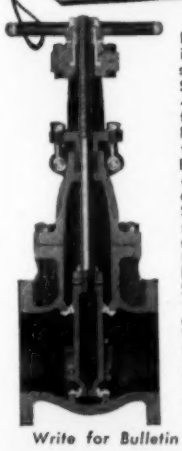


Built specifically for conveying coal from truck to bin, Farnco conveyors are constructed entirely of aluminum to facilitate handling or mounting on truck. Box frame construction will not twist and throw belt out of line. Head and tail pulleys are kept clean even with wet slack by permanent scrapers. All shafts operate on grease sealed antifriction bearings with only power unit requiring lubrication. Utilizing V-belt drive, conveyor is powered with 2½-horsepower, 4-cylinder air cooled gasoline engine or 1-horsepower electric motor. Pneumatic-tired truck can be adjusted for height. Made by **G. N. Crawford Equipment Co.**, 6714 Kelly St., Pittsburgh 8, Pa.

▲ Mention Item NED-3828 when writing ▲

Precision Engineering Makes this KENNEDY VALVE Rugged and Dependable . . .

KENNEDY STANDARD IRON BODY WEDGE GATE VALVE
Fig. 0611, outside-screw-and-yoke. Service up to 125 lb. p.s.i. steam; 200 lb. p.s.i. water, oil or gas . . . 1½" through 48" sizes available.



HANDWHEEL, large, for ample leverage . . . secured to yoke nut by large bronze, hexagonal wheel nut, readily removable.
YOKE NUT, bronze, thread contact with stem at least 1½ times stem diameter eliminates stripping, reduces wear, easily lubricated.
PACKING GLAND machined for tight seal with stuffing box, bronze-bushed at stem. Slotted construction simplifies repacking.
STUFFING BOX, packing space depth is more than 4 times width for longer packing life. Bronze bushed for corrosion resistance, durability.
PACKING, molded rings of lubricated asbestos maintain tightness without excessive gland pressure.
BOLTS, swing eye type with washer nuts, for greater convenience in repacking. Rust-proofed to prevent corrosion.
STEM, rolled bronze, liberal diameter, for high tensile and torsional strength. Top seat collar permits repacking under pressure.
FLANGES are heavy and well filleted. Flanged ends have reinforcing ribs for extra strength.
STEM AND DISC threaded together, prevented from turning by nickel copper alloy pin with ends riveted over.
WEDGE DISC, reversible and interchangeable, reinforced by integrally cast interior posts. Openings permit drainage in any position.
DISC RINGS, bronze, wide and thick, forced into dove-tailed grooves in disc to form practically integral construction.

Write for Bulletin No. 50. BUY FROM YOUR LOCAL DISTRIBUTOR

THE KENNEDY VALVE MFG. CO.
1070 EAST WATER ST. ELMIRA, NEW YORK
VALVES • PIPE FITTINGS • FIRE HYDRANTS
OFFICE-WAREHOUSES IN NEW YORK, CHICAGO, SAN FRANCISCO • SALES REPRESENTATIVES IN PRINCIPAL CITIES

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Try THE BIGGEST IMPROVEMENT IN CLEANING

the IDEAL "Tank-Type" Cleaner

ALL-PURPOSE — General vacuum cleaning, scrap collection, water pick-up.

Prove to yourself in five minutes that the all-purpose IDEAL "Tank-Type" Cleaner does every kind of cleaning job faster, easier and more thoroughly. Nothing else like it! . . . Scientific combination of waterlift and air volume for highest effective cleaning efficiency. Self-contained filtering system traps every particle of dust . . . Superpowered by 1½ H.P. motor. Compact design and swivel hose connection—big 5-in. wheels—non-tipping due to low center of gravity — all these make the IDEAL far easier to use. Arrange for FREE DEMONSTRATION TODAY!

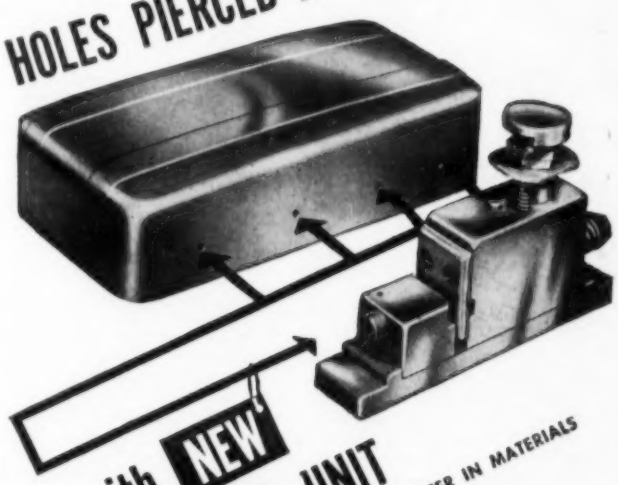
Don't Miss IDEAL'S 4-in-1 "Hand-Type" Cleaner Blows—Sprays—Vacuums—Dries Heavy-Duty 1½ H.P. Weighs 14½ lbs. Also Medium-Duty, ⅔ H.P. and Light-Duty, ½ H.P. Models.

SEE YOUR LOCAL IDEAL DISTRIBUTOR OR WRITE US

IDEAL INDUSTRIES, Inc. Sycamore, Illinois
Canadian Distributor: Irving Smith, Ltd., Montreal

▲ Mention Item NED-3830 when writing ▲

HOLES PIERCED AT 90° ANGLE . . .

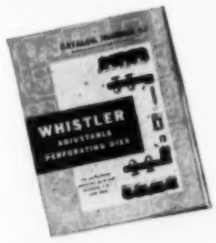


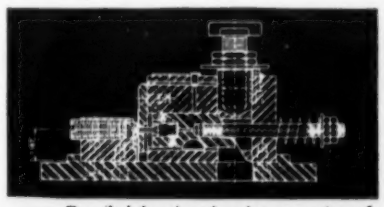
with NEW WHISTLER UNIT

PERFORATES HOLES UP TO ½" IN DIAMETER IN MATERIALS TO 1/16" THICK MILD STEEL

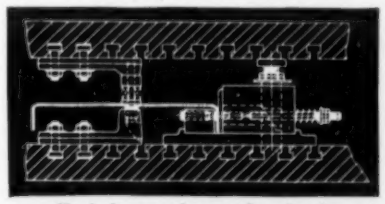
DETAILS EXPLAINED IN CATALOG NO. 47

Get the facts about this 90° perforating unit in a hurry. Your copy of this catalog will be sent at once upon request.





Detailed drawing showing operation of HU-50 90° Perforating Unit.



Typical set-up shows 90° perforating unit operated in conjunction with standard perforating equipment.

Extruded shapes, ells, angles and other molded, shaped or fabricated pieces are easily pierced from the side at 90° with HU-50 Perforating Units. Quickly set up and adjustable, these units may be used separately or with standard perforating equipment. The advantages provided by other Whistler Adjustable Dies are retained.

Absolute accuracy is assured. Quick change-over of hole arrangements can be made . . . in many cases, on the press. Production economies and speeded up operating schedules are effected. Continuous re-use of units in different groupings spreads initial cost.

It makes sense to look into the use of Whistler Adjustable Dies for all perforating, notching, slitting or rounding operations.

S. B. WHISTLER & SONS, INC.
750 MILITARY ROAD
BUFFALO 17, NEW YORK

▲ Mention Item NED-3831 when writing ▲

▲ Mention Item NED-3832 when writing ▲

Steel Safety Collars at production prices

If you use safety collars for shaft sizes of 5/8", 3/4", 15/16" or 1" in lots of 500 or more you can save money. Our automatic equipment is turning out these safety collars for our own needs on a high speed, low cost basis.
Accurately machine finished on the thrust face, which is true and square, they have close tolerance finish of the inside diameter. Give perfect alignment of the face with bearing end. Made with 1/4" wall thickness and supplied with hollow head set screw. Available with hard baked aluminum finish to resist corrosion. Ask for prices and full information.

Randall Graphite Bearings, Inc.
609 West Lake Street, Dept. 626, Chicago 6, Ill.

▲ Mention Item NED-3833 when writing ▲

● FLEXIBLE!
● UNBREAKABLE!
● EFFICIENT!

Gives infrared radiation in longer wave lengths which are absorbed almost equally well by all colors and textures of surfaces. Rugged all-metal construction with aluminum body withstands shock, vibration, moisture and dust. Easy to install in tunnels, single banks, double banks, ovens, etc.

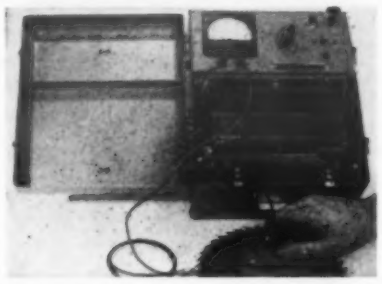
Inconel-sheathed tubular elements operate at 1400° F. Uniform, even heat in low or high ambient temperatures. Only 2 inches deep in nominal lengths of 2, 2½, 4, 5, 6 and 7 feet. Sections may be interlocked, to form banks, etc.

INTERESTED IN DETAILS?
Send for complete application reports on Chromalox Electric Radiant Heaters.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.
See other advertisement on page 59
CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

▲ Mention Item NED-3834 when writing ▲

ELECTROLYTIC ETCHER



Used in combination with E-Z mark etcher, this hand pad attachment facilitates electrolytic etching of parts which cannot be accommodated on machine itself because of size or weight of piece. Device will etch on contact any trademark or information typed or printed on stencil and will mark nearly all metals. Operation consists of connecting piece to be marked to machine, either by attaching lead with alligator clip or by placing piece on metal plate connected to machine. Hand pad is then placed on piece, and it is marked as with rubber stamp. Switches on machine can be used for continuous operation or momentary contact. Machine is furnished to operate on 115 or 230-volt alternating current. Made by **Crown Industrial Products Co.**, 1307 W. 69th St., Chicago 36, Ill.

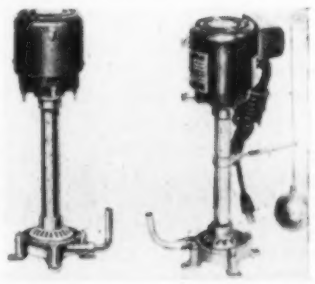
▲ Mention Item NED-3835 when writing ▲

UTILITY HYGROMETERS

Having accuracies slightly less than laboratory instruments, Certified and Utility general purpose hygrometers both employ humidity sensitive diaphragm which is active in response within comparatively low lag periods. Both instruments are designed for practical usage at temperatures from 0° to 130° F and at relative humidities ranging between 15 and 95 per cent. Accuracy of Certified model is within plus or minus 3 per cent relative humidity and that of Utility model within plus or minus 5 per cent relative humidity. Models are priced at $15 and $10, respectively. Made by **Serdex, Inc.**, 81 Cambridge St., Boston 14, Mass.

▲ Mention Item NED-3836 when writing ▲

SMALL IMMERSION PUMPS



Of compact design, light in weight and easily portable, small immersion pumps are powered by 1/30-horsepower shaded four-pole electric motors. Designed for continuous duty on 110-volt 60-cycle current, they can be used in air conditioning, for general circulation purposes, for laboratory application requiring transfer of liquids and similar industrial uses. Capacity varies from 215 gallons per hour at 0-foot head to 75 gallons per hour at 6-foot head. Outlet can be furnished in ½-inch outside diameter turned up copper tubing or ¼-inch inside pipe threads. Made by **Samuel S. Gelber Co.**, Dept. ED, 162 N. Clinton St., Chicago 6, Ill.

▲ Mention Item NED-3837 when writing ▲

are part of the process

Logan Conveyors proved the best method for handling Fluorescent tubes in this lamp factory. They virtually eliminate risky "hand-handling," yet send delicate tubes swiftly and safely on their way to dealers. The resulting lower costs and "on time" deliveries again prove the economy of Logan Conveyors in industry. Literature will be sent on request.

Logan Conveyors
LOGAN CO., 215 CABEL ST. • LOUISVILLE 6, KY.

▲ Mention Item NED-3838 when writing ▲

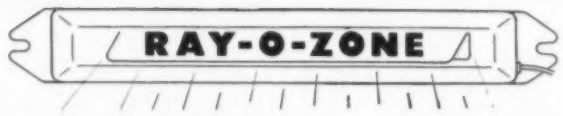
SAFE-LINE
WIRE ROPE CLAMPS

Write for details of this—the only PERFECTED wire rope clamp on the market. Millions used by Manufacturers, the Armed Forces and Industries.

NATIONAL PRODUCTION COMPANY
4557 ST. JEAN AVENUE • DETROIT 13, MICHIGAN

▲ Mention Item NED-3839 when writing ▲

Make Rest Rooms Sanitary...



The Low-Priced Rest Room Sterilizer

- Kills germs
- Kills offensive odors
- Kills air-borne bacteria
- Irradiates from fixture to floor

RAY-O-ZONE is quickly, easily installed in your shop or plant washroom. Equipped with 8-watt ultra-violet germicidal tube. Aluminum-finish reflector; exterior, ivory enamel.

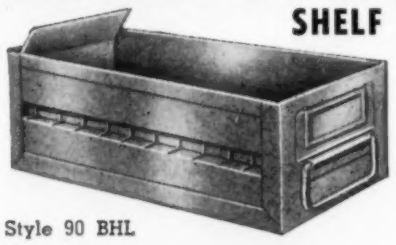
Order as many as you need direct — or write for full information.

$14.95
f.o.b. Lancaster, Pa.

MERCHANDISING ASSOCIATES
BOX 411 • LANCASTER, PA.

▲ Mention Item NED-3840 when writing ▲

STEEL ADJUSTABLE COMPARTMENT SHELF DRAWERS



Style 90 BHL

IMMEDIATE SHIPMENT

BAY adjustable compartment shelf drawers are ideal for handling and storing small quantities of small parts. Boxes are slotted on 1" centers to accommodate dividers. Label holder on front of box for easy identification of contents. Drop handle on front only. Drawers are finished in baked green. Dividers are furnished at slight extra cost.

OTHER SIZES AND STYLES AVAILABLE

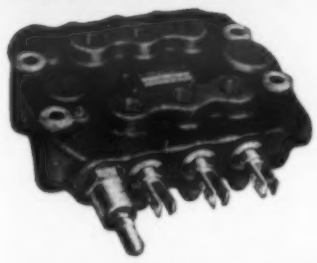
95 BHL	5½ x 11¾ x 4⅝	Green Finish—$1.05 ea.
96 BHL	5½ x 17¾ x 4⅝	Green Finish—$1.20 ea.
97 BHL	8¼ x 11¾ x 4⅝	Green Finish—$1.15 ea.
98 BHL	8¼ x 17¾ x 4⅝	Green Finish—$1.30 ea.

Send for Catalog
All Prices F. O. B. Philadelphia Plant
Phone—Wire—Write

BAY INC. 3009 North 16th Street PHILADELPHIA 32, PA.
Telephone BAldwin 9-1805

▲ Mention Item NED-3841 when writing ▲

Speed up hydraulic control with
HYDRECO V13 SERIES
Parallel Circuit Control Valves



Typical V13 Series Valve—designed for control of three double-acting cylinders.

OPERATE TWO OR MORE CYLINDERS AT THE SAME TIME . . . providing pressure requirements are the same—V13 Series Valves will operate two, three or four single or double-acting cylinders individually or all at the same time.

WRITE FOR CATALOG AND FULL INFORMATION

HYDRAULIC EQUIPMENT COMPANY
1108 East 222nd Street • Cleveland 17, Ohio

HYDRECO Hydraulic Control Devices
PUMPS • CYLINDERS • VALVES

Mention Item NED-3842 when writing

FLOORS BROKEN, ROUGH OR UNEVEN?
USE SWIFT-FLOOR

60 SECONDS AFTER IT'S APPLIED YOU CAN TRUCK 50,000 LBS. OVER IT!

No need to slow production when floors need repair. Use Swift-Floor. After just 60 seconds, you can put your floor to work. Swift-Floor will support loads of more than 25 tons. It's skid-proof, fireproof, resilient, and self-sealing. Swift-Floor will make your broken floors look like new.

EASY TO APPLY
It's pre-mixed and ready to use. Any workman can apply it. Just prime, fill, and tamp.

GUARANTEED!
If you are not satisfied with Swift-Floor, return the unused portion and your money will be refunded.

WRITE FOR DETAILS

THE MONROE COMPANY, INC.
10705-F QUEBEC AVENUE • CLEVELAND 6, OHIO

Mention Item NED-3843 when writing

Anti-Corrosive
STAINLESS STEEL FASTENINGS DO THE JOB *Better*

When You Come to Fastenings, Be Sure You're Right by Specifying Stainless!

Stainless fastenings are a *must* in today's industrial design, since no other material offers such versatility of properties or is so suited to unusual demands. And stainless fastenings *cut costs* by lasting longer and reducing maintenance in many ways!

7,000 Varieties

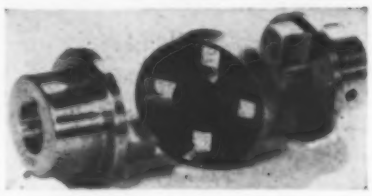
Anti-Corrosive, America's oldest and largest supplier dealing *exclusively* in stainless fastenings, carries this tremendous stock for your convenience . . . plus a special order service available for occasional odd sizes.

Write TODAY for Folder B-49 for Further Information!

Anti-Corrosive Metal Products Co., Inc.
Manufacturers of STAINLESS STEEL FASTENINGS
CASTLETON-ON-HUDSON, NEW YORK

Mention Item NED-3844 when writing

FLEXIBLE COUPLING



Employing steel-banded synthetic rubber spider which withstands high temperature and is completely oil-resistant, this articulated flexible coupling compensates for both parallel and angular misalignment, does not require lubrication and runs in complete silence. Steel spider ring allows coupling to operate at high speed without damage or breakdown from torque and centrifugal force. Concave surfaced steel driving lugs fit into convex surfaced cavities of spider and compress rubber to minimize vibration. Unit has highly finished steel surface to prevent injury from accidental contact with coupling while in motion. Made by **Estey Co.**, 547 E. Main St., Canandaigua, N. Y.

Mention Item NED-3845 when writing

PRODUCTION RECORDER

Recording number of hours any piece of machinery or equipment with moving parts has been operated, Reliance Hourmaster mechanical hour recorder converts machine speeds of 1 to 4000 revolutions per minute into hours of operation. Unit is self-contained, and space is provided for record cards which can be used to accumulate service, production or maintenance data. Each instrument adds up to 100,000 hours of operation and requires no service or maintenance. Made by **Barbour Stockwell Co.**, 203 Broadway, Cambridge 39, Mass.

Mention Item NED-3846 when writing

IMPACTOR MACHINE

Capable of working flush to walls, tracks or other edges, model 25 impactor smoothly finishes 60 to 80 square feet per minute of bituminous or dry concrete pavement patching, mastic or cement-composition flooring base, or earth. In addition to use in laying and maintaining industrial floors and driveways, impactor tamps large earth areas to uniformity exceeding that produced by air tamps. Heated plate strikes 1750 to 2000 blows per minute, each exceeding 700 foot-pounds impact, producing greater density than pass of 10-ton roller. Sealing and curing pavement surface for immediate use, machine eliminates troweling. Powered by air-cooled engine, it is self propelled and one-man-operated. Made by **Wayer Impactor Co.**, Rm. 330-A, 12 N. Third St., Columbus 15, O.

Mention Item NED-3847 when writing

WAHLERT SAFETY CARBOY DRAINER

STOPS "acid splash"

No spill, no splash. Air vent assures steady flow, eliminates pumping or syphoning. All parts replaceable.
Three sizes to fit all standard carboys. (Mention O. D. of neck when ordering.) **$12.20** each
Wahlert "Standard" Tilter for 13 gallon carboys **$16**
Wahlert "Junior" Tilter for 5 gallon carboys.
SPECIAL OFFER! Drainer and Filter purchased in combination. **$24.95**

Write for descriptive folder TODAY.

WAHLERT SAFETY PRODUCTS CORP.
5 De Kalb Avenue, Brooklyn 1, N. Y.

Mention Item NED-3848 when writing

HOOKS, TONGS GRIPS and SLINGS

A COMPLETE LINE OF HOIST GRABS—for fast safe handling of *pipe, rails, drums, plate* and *structural steel, stone, timber, boxes* and *odd-shaped objects.* Carefully engineered Downs Hoist Grabs have a safety factor much greater than capacity ratings listed. Many types of hooks, tongs, grips and slings available for quick delivery.

WRITE FOR FREE ILLUSTRATED CATALOG #200

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS 540 W. VERNON AVENUE LOS ANGELES 37, CALIF.

Electric Cranes • Hand Cranes • Jib Cranes • Sheaves • Sheave Blocks • Plate Grips • Plate Hooks • Crane Trolley Hoists • Crane Wheels • Crane End Truck Units • Jib Crane Fittings • Automatic Mechanical Load Brake Crane Hook Blocks

Mention Item NED-3849 when writing

Simple—Accurate—
WEIR METERS
for Waste Measurement

● Float-and-cable Weir Meters developed by Foxboro offer simple, accurate measurement of liquid flow. Widely used in sewage, chemical processes, and industrial waste disposal.

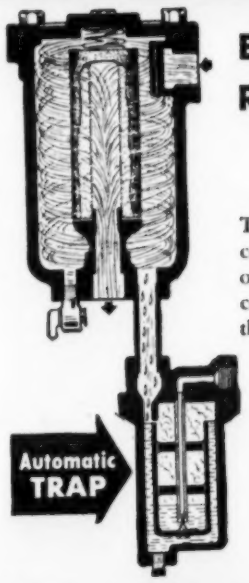
The Foxboro Weir Meter is extremely simple. Operates through motion of float to measure head through V-notch, rectangular or Cippoletti weirs—or Parshall flumes. Motion is transmitted by cable to accurate recording or integrating mechanisms. Direct-reading, uniform flow scale—copper or rubber-covered floats.

Write for detailed information. **The Foxboro Company, 134 Neponset Ave., Foxboro, Mass., U. S. A.** Also Montreal, Canada. Branches in principal cities.

FOXBORO Reg. U. S. Pat. Off. WEIR METERS

Mention Item NED-3850 when writing

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES

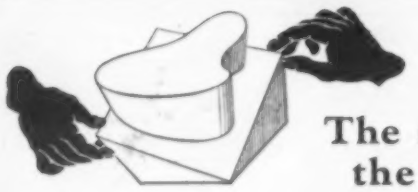
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105.

R. P. ADAMS CO., INC.
227 E. Park Drive • Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

Mention Item NED-3851 when writing



The shape's the thing...

The selection of a suitable steel and its subsequent satisfactory performance can be made easy by good design.

How and in what shape a part is made is, we hold, of fundamentally greater importance than of what it is made.

In designing a piece of machinery it is necessary to consider Design, the choice of steel, and its Heat Treatment. All three are highly significant factors, but of them we believe Design to be vital because even the best in steel and treatment will not save a poorly designed part.

To evaluate the importance of good design and its vital relationship to the selection of steel and its heat treatment, we have prepared a book—"Three Keys to Satisfaction". This starts by discussing mainly design factors involved in stress concentrations, and includes useful sketches comparing poor and good features of design from the aspect of subsequent metallurgy. It is available on request to all engineers and designers.

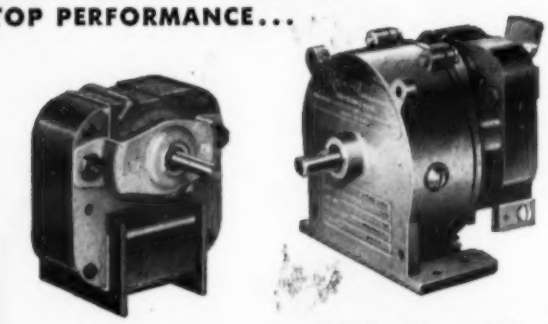
This booklet sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

F17

Mention Item NED-3852 when writing

FOR JOBS THAT CALL FOR TOP PERFORMANCE...



...HERE ARE TWO NEW

Redmond MICROMOTORS

2-POLE OFFSET MICROMOTOR

Here's a low cost, skeleton-type Micromotor that is ideal for use in small room heaters, fans, animated displays, and other applications calling for light weight, low power motors. Features include air gap concentricity, sturdy bearing brackets and oil reservoirs packed with felt. Built in sizes up to 1/100th horsepower.

GEARHEAD MICROMOTOR

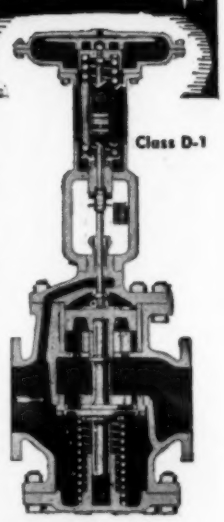
This sturdy, quiet-running gearhead unit is for applications requiring unusual r.p.m. specifications. Output selections are almost without limit down to 2 r.p.m. It is powered by a dependable Redmond 2-pole offset Micromotor with a single bearing lubricated from the gear box. Brake device can be supplied.

Redmond **COMPANY, INC.**
OWOSSO, MICH.
Offices in New York, Chicago, Dayton, Los Angeles, Dallas

Mention Item NED-3853 when writing

Starred Performance for 10 Years

Tight Closing,
Single Seated
Fully Balanced,
Diaphragm Regulating Valves



Class D-1

***Offer these* ADVANTAGES**

- **SINGLE SEATED, FULLY BALANCED**—combines dead-end, tight shut-off with double seated capacity; operates with fast, smooth response for small changes in diaphragm pressure.
- **SMOOTH THROTTLING CONTROL**—without pressure drop limitation up to 600 PSI. Sizes up to and including 8" with bronze or cast iron bodies, 1¼-4" cast steel.
- **LARGE CAPACITY**—equal to or greater than standard, long stroke, double-seated valves.
- **LOW FRICTION STUFFING BOX**—specially designed packing including plastic, asbestos and metal rings in each set, requires minimum attention.
- **INTERCHANGEABILITY OF REPLACEMENT PARTS**—hardened main valves, hard face seat rings and hardened stem bushings renewable without removal of body from pipe line.

SEND FOR—your copy of Bulletin 462.

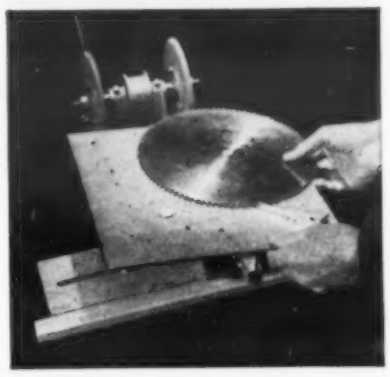
ESTABLISHED 1900 LESLIE CO.

LESLIE CO.
227 Grant Ave., Lyndhurst, New Jersey

PRESSURE REDUCING VALVES • • PRESSURE CONTROLLERS
PUMP GOVERNORS • • • TEMPERATURE REGULATORS
SELF CLEANING STRAINERS • • LESLIE-TYFON WHISTLES

Mention Item NED-3854 when writing

SAW SHARPENING FIXTURE



Providing simple quick means for precision circular saw sharpening, this commercial saw sharpening fixture accommodates saws from 1½ to 16 inches in diameter. Fixture is mounted on same base as two motor-driven grinding wheels and permits saws to be turned and swiveled during sharpening. Adjustable stop accurately limits amount of swivel angle to wheels insuring circularity after sharpening, and index finger sets distance between each tooth during operation. Table can be tilted over 30 degrees on either side. Two grinding wheels can be supplied with fixture if desired. One has 45-degree angle for sharpening crosscut or fine teeth on combination saws and other is 5/16-inch wide with radius for sharpening rip saws and large teeth on combination saws. Made by **Treyco Products,** 264 Hartford Ave., Buffalo 17, N. Y.

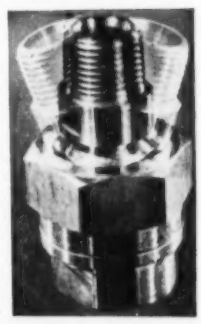
Mention Item NED-3855 when writing

INDUSTRIAL TOILET SEATS

Available in white solid plastic as well as conventional black, models LP20 and LP40 industrial toilet seats feature sanitary open design and self-raising and self-sustaining hinge construction. Retaining original color with occasional soap and water washing, white plastic will not chip, peel, fade, or wear out. Hinge construction on both models is plastic covered and sealed against moisture and dirt. Made by **Sperzel Co.,** Dept. NED, 123 Fourteenth Ave. South, Minneapolis 4, Minn.

Mention Item NED-3856 when writing

SWIVEL PIPE JOINT COUPLING



Capable of turning 20 degrees in any direction without restricting flow, universal swivel ball joint coupling absorbs vibration and movement in installations where pipe cannot be supported rigidly. Leakage and drip are eliminated by application of O-ring principle which provides positive seal against leakage at any pressure within unit's rating. Standard ⅜-inch joint can be used for pressures ranging from ¼-ounce to 150 pounds per square inch and for temperatures up to 350° F. Models for any size pipe and for higher pressures and temperatures can be obtained also. Made by **Kelite Products, Inc.,** 130 Elmyra St., Los Angeles 54, Calif.

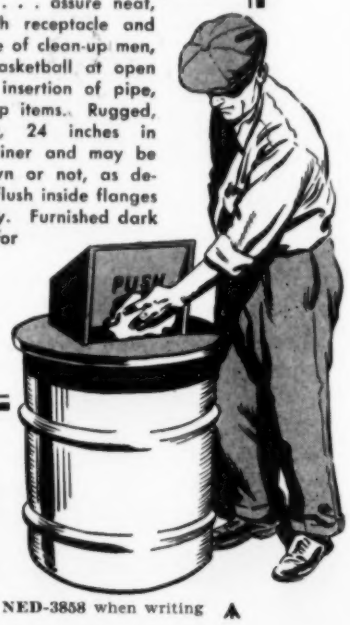
Mention Item NED-3857 when writing

ELIMINATE FIRE HAZARDS AND IMPROVE PLANT HOUSEKEEPING WITH THE NEW, LOW-COST TRASHATCH

Put a Trashatch on every open metal drum, barrel or other receptacle now used for trash and waste disposal. Heavy steel circular base, hood and special receiver door (approx. 15 lbs.) provide a smothering seal against possible fire . . . assure neat, sanitary condition of both receptacle and surroundings . . . save time of clean-up men, and workers who play basketball at open waste cans . . . prevent insertion of pipe, timber and other non-scrap items. Rugged, industrial-class equipment, 24 inches in diameter to fit any container and may be permanently fastened down or not, as desired. Gravity door rests flush inside flanges of the hood, opens in only. Furnished dark green enameled. Write for literature.

PRICE ONLY **$7.25**

Ask about quantity discount.



W. T. PETTIT & SONS
129 CENTER STREET
Youngstown, Ohio

Mention Item NED-3858 when writing

PRECISION MADE *just for you*

● Each Bridgeport bellows, bellows assembly or device, is precision engineered by skilled specialists . . . produced *on order* to meet your requirements exactly. They're used throughout industry to help solve design problems involving control of temperature or pressures; sealing, etc. For complete information write Dept. LZ-100 today.

Bellows Assemblies . . . Bellows . . . Bellows Devices

BRIDGEPORT THERMOSTAT
Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

Mention Item NED-3859 when writing

Have you a similar use for this blind 1-piece fastener?

How Fuller Uses Spring-Locks in Rotary Brushes.

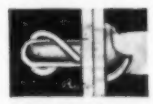
Now it's the Fuller Brush Company that has solved its tough fastening problems with versatile, one-piece Spring-Lock fasteners. This economical blind-fastener holds brush cores of power-driven Fullergript Rotary Brushes firmly in place—at the same time simplifying installation and replacement problems. Here's why:

1. **It's a Blind Rivet**—Self-adjusting for various material thicknesses.
2. **It Replaces Special Screws and Welds**—Cuts material and assembly costs.
3. **It is Easily Installed and Removed**—Spring-Locks lock and unlock with a quarter turn.

Spring-Lock heads are metal or plastic and molded to strength and shape for your special design needs. Available in many standard types and sizes. Give us your fastening problem—we'll work it out.

Write for Samples

Other Uses



Blind Rivet

Shelf Support

Door Strike

SIMMONS FASTENERS
SIMMONS FASTENER CORPORATION, 1757 North Broadway, Albany, New York

Mention Item NED-3860 when writing

The "ECONO—LINER"

A NEW safety line marker especially designed for use by industrial plants

COMPACT . . . LIGHT . . . Here are some of the *added* features included in this completely modern machine: paint pot has quick release for easy reloading and cleaning; paints to within ¼" of fixed object; special paint guides insure sharp lines on factory floors, wood block or rough surfaces; use as light duty spray rig.

Specify Bulletin 1003 for details
Other models available

Universal Mfg. & Sales Co.
8716 S. Santa Fe Avenue South Gate, Calif.
Eastern Factory Branch: 1426 "K" St., N.W., Washington 5, D. C.

Mention Item NED-3861 when writing

Eliminate HIDDEN COSTS THAT CUT DOWN PROFITS!

Unnecessary operations may be holding down profits. Brightboy may prove that you can eliminate separate burring, finishing, cleaning and polishing steps, *combine them into one!* Test Brightboy in comparison with your present procedure on work requiring any or all of these finishing operations.

Rubber and abrasive Brightboy produces a unique surfacing-action that often serves as a final polish. Use it right after the rough grind. Bridge all steps between grind and buff in one operation. Shape it to contours, use it for precision work. No special preparation needed before use.

GET COST-SAVING METHODS & PRODUCTION DATA from your dealer. Ask for the Brightboy Catalog Manual and prices. Write us on special problems.

BRIGHTBOY INDUSTRIAL DIVISION
Weldon Roberts Rubber Co.
Newark 7, N. J.
America's Pioneer Manufacturers of Rubber-Bonded Abrasives

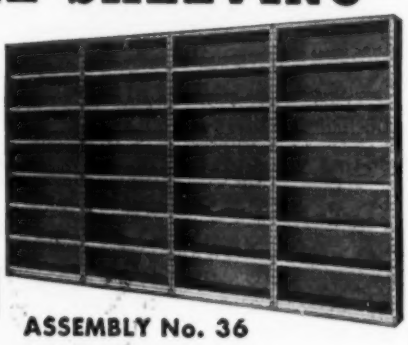
WELDON ROBERTS **Brightboy**

▲ Mention Item **NED-3862** when writing ▲

Neiman

ADJUSTABLE STEEL SHELVING

PARTS BINS • COUNTERS • ALL-PURPOSE STORAGE EQUIPMENT • TOOL-CRIB Specialists



ASSEMBLY No. 36

Closed type shelving with backs, sides and bases. Rack as illustrated, contains: 4 units, each 36" wide x 12" deep x 7'3" high, with 7 shelf openings or 8 shelves. Other popular assemblies from 12" to 36" in depth to 24", 36", 42" and 48" in width by 3'3" to 12'3" in height.

Write for New Catalog 20 and Price List

24 SIZES IN STOCK PROMPT DELIVERY

Phone LO 3-9954

MANUFACTURERS SINCE 1932

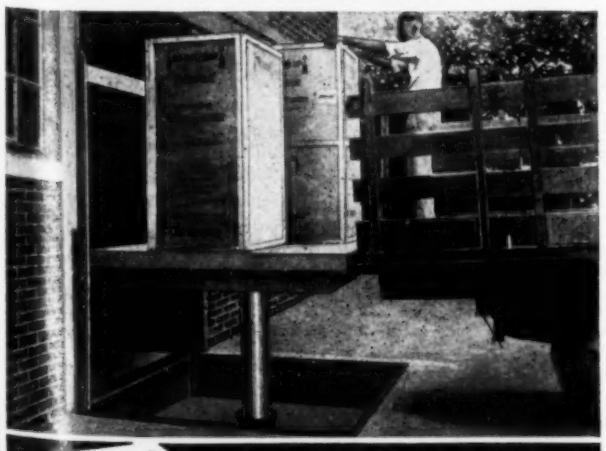
NEIMAN STEEL EQUIPMENT CO., Inc.
106-110 N. THIRD STREET - PHILADELPHIA 6, PA.

▲ Mention Item **NED-3863** when writing ▲

NEW CATALOG SHOWS HOW TO *Lift Loads Faster!*

You can slash labor costs by using Levelator Lifts for loading and unloading jobs . . . and for feeding and receiving materials from presses, shears, etc. Levelator car rises quickly and smoothly as oil is forced into powerful hydraulic jack by simple electric pumping mechanism or compressed air. Operation safe, dependable, economical. Installation simple. Write for Catalog RE-202.

ROTARY LIFT CO., 1018 Kansas, Memphis 2, Tenn.

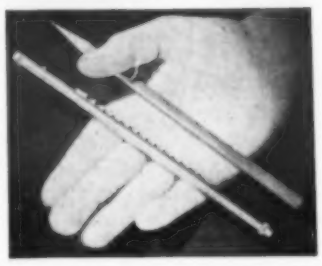


Rotary* LEVELATOR* LIFTS

*Reg. U. S. Pat. Off.

▲ Mention Item **NED-3864** when writing ▲

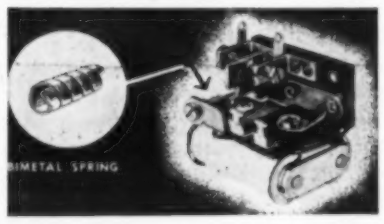
SMALL KEYWAY BROACH



Capable of cutting 1/16-inch wide keyways up to 0.070-inch in depth, this pencil-size Glenny broach features protected blade, accurate adjustment and precision cutting. Cutting blade is hardened to 63-65 Rockwell C and is held in precision-ground hardened body by two adjustment nuts. Latter permit infinite adjustment for depth of cut. Distributed by **Kase Machine Co.,** 18434 Buffalo Ave., Cleveland 19, O.

▲ Mention Item **NED-3865** when writing ▲

COMPENSATING RELAY



Developed for battery charge control where operating voltage must decrease with rising temperature, this temperature compensated sensitive relay utilizes bimetal spring to provide voltage settings stable within 1 per cent with 25 milliwatts operating power. Windings are available for all common charging voltages.

Same construction is also available in other relay types giving operation at essentially constant voltage at temperatures from −50° to 85° C. Adjustments are offered for voltages from 0.01-volt up, at sensitivities of 5 to 25 milliwatts. Made by **Sigma Instruments, Inc.,** 41 Ceylon St., Boston 21, Mass.

▲ Mention Item **NED-3866** when writing ▲

BAND SAW

Equipped with all essentials for efficient and safe high speed operation, model 36-L portable band saw saws wood or sheet metal. Main work table is 30 x 36 inches with handwheel operated table tilt 45 degrees to right and 5 degrees to left. Machine has 36-inch throat and 20-inch maximum thickness capacity. It utilizes narrow hard-tooth flexible-back Buttress blade which requires no resharpening or spring temper up to 2-inch width. For fine work, blades as narrow as ¼-inch can be used which will permit sawing ⅝-inch radius. Machine has large capacity dust spout for exhaust connection, spring-tensioned upper wheel, counter balanced saw post and 36-inch rubber-tired saw carrier wheels. It can be furnished with either direct or belted drive for single speed sawing or with stepless variable blade speed control over range from 1000 to 5000 or 2000 to 10,000 feet per minute for maximum flexibility. Drive motors ranging from 3 to 10 horsepower can be used to meet power requirement of work. Made by **DoALL Co.,** 254 N. Laurel Ave., Des Plaines, Ill.

▲ Mention Item **NED-3867** when writing ▲

NATIONAL *Sanders*

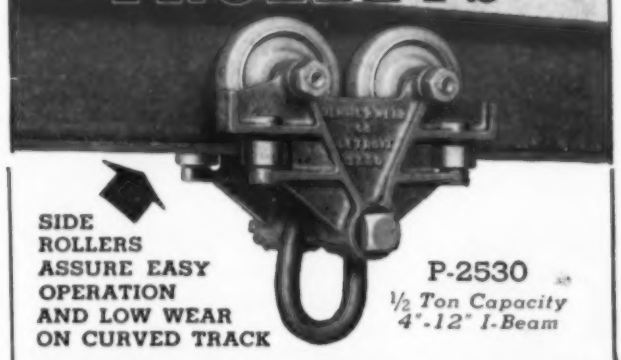
THIS powerful vibrationless air sander operates at 4000 to 6000 r.p.m. — has an abrasive area of 25 sq. inches — and an orbital action, making a 3/16" circular pad stroke. The high speed Model 400 leaves a perfectly smooth surface, often times making filler coats unnecessary and so saving time and money. Write for details today on the versatile, handy National Model 400 Air Sander.

Powerful . . . Vibrationless . . . Light Weight

NATIONAL AIR SANDER, INC. ROCKFORD ILLINOIS

▲ Mention Item **NED-3868** when writing ▲

hand pushed **TROLLEYS**



SIDE ROLLERS ASSURE EASY OPERATION AND LOW WEAR ON CURVED TRACK

P-2530
½ Ton Capacity
4"-12" I-Beam

Webb *Hand Pushed Trolleys* are versatile, simple, economical, effective. Drop-forged, hardened wheels assure long wear; ball bearings and side-guide rollers make them very easy to push. Write for *Hand Pushed Trolley* Bulletin and prices.

jervis b. webb co.

CONVEYOR ENGINEERS and MANUFACTURERS
8951 Alpine Ave. • Detroit 4, Mich.
WEBB
Offices in Principal Cities

▲ Mention Item **NED-3869** when writing ▲

• The M-118-D is a new Automatic Recording Weigher that prints and visually indicates dormant loads with rapidity and accuracy. The price fits the budgets of small business, yet meets the most critical demands of large industrial jobs.

The capacity is from 1,000 to 100,000 pounds. Accuracy and precision are built into this Automatic Weigher.

Write for illustrated bulletin C describing the many advantages of this new M-118-D weighing machine.

STREETER-AMET COMPANY
4105 RAVENSWOOD AVENUE
CHICAGO 13, ILLINOIS
Standard of Accuracy Since 1888

STREETER-AMET

▲ Mention Item **NED-3870** when writing ▲

Announcing **"NORMA"** *Stability-Tested* **GREASE**

For General Purpose Bearing Lubrication

- **CUTS BEARING LUBRICATION COSTS**
- **INCREASES BEARING LIFE**
- **ASSURES EFFICIENT BEARING OPERATION**

Users of ball and roller bearings can now obtain "Norma" Stability-Tested grease for all types of general purpose bearing lubrication.

Used for years in Norma-Hoffmann prepacked sealed bearings, "Norma" Stability-Tested grease has been giving excellent performance in all types of applications.

Outstanding advantages include — *High Resistance to Oxidation* in storage and in service as proven by the well known Norma-Hoffmann Oxidation Bomb Test.

Insoluble in Water — will not emulsify or aerate in the presence of condensed moisture.

Protects Against Corrosion — Actual field tests in the Canal Zone prove its outstanding corrosion resistance.

Laboratory Tested — Each batch of grease is laboratory controlled to meet rigid specifications.

"Norma" Stability-Tested grease is available in tubes for easy bearing lubrication and in bulk for large quantity grease users. Keep your bearings operating at peak efficiency, use "Norma" Stability-Tested grease. Write for prices and information.

NORMA-HOFFMANN Precision BEARINGS

NORMA-HOFFMANN BEARINGS CORPORATION
Stamford, Connecticut

▲ Mention Item **NED-3871** when writing ▲

...the air you breathe, that is when you wear a Dupor Automatic watercooled respirator. Sponge filter dipped in clean, cool water provides moist air. Keeps dust, fumes, smoke, paint spray out. Mask is of soft, white rubber. Provides panorama vision. Order today from...

H. S. COVER, SOUTH BEND, IND.

DUPOR AUTOMATIC WATER-COOLED RESPIRATOR

Sample Sent $1.65 p.p.

▲ Mention Item NED-3872 when writing ▲

SOLENOID OPERATED

AIR CONTROL VALVES—"VALVAIRS"

● NON-CORROSIVE
● NO METAL SEATS
● FULL PIPE AREA USED

2-WAY
3-WAY
4-WAY
60 numbers to choose from

Ask for Bulletin S-N

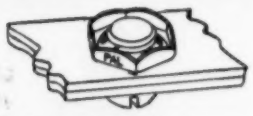
VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair

▲ Mention Item NED-3873 when writing ▲

2 ways to SLASH FASTENING COSTS with

PALNUT TRADEMARK REGULAR TYPE SELF-LOCKING NUTS



1. As a self-locking nut on light assemblies

Self-locking PALNUTS cost less than ordinary nuts and provide a vibration-proof assembly without lockwashers. Fast assembly with hand tools—extra fast with power tools. Require less space and weigh less than nut and washer.

2. As a locknut on heavy assemblies

Use an ordinary nut to carry load, apply a PALNUT on top to hold tight under severest vibration. This combination costs less than other locknuts, requires no more space, assembles fast with hand or power drivers. No damage to nut or nut seat.

● Send details of assembly for samples. Ask for literature on entire PALNUT line.

The Palnut Co., 45 Cordier St., Irvington 11, N. J.

PALNUT SELF-LOCKING NUTS AND FASTENERS for quick, secure fastening at low cost

▲ Mention Item NED-3874 when writing ▲

ROTARY GEAR PUMPS

Capable of maintaining continuous pressure up to 1000 pounds per square inch and intermittent pressure up to 1500 pounds per square inch, these Constant-Flo high pressure rotary gear pumps supplement line of standard low pressure pumps and maintain same mounting dimensions. They employ antifriction bearing design and have high mechanical and volumetric efficiency. Applications include use on power units, trucks and industrial materials handling equipment. Made by **John S. Barnes Corp.**, 160 Walnut St., Rockford, Ill.

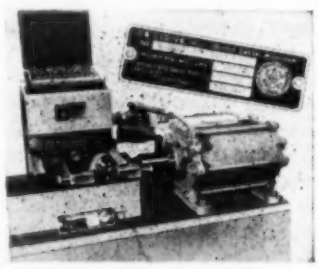
▲ Mention Item NED-3875 when writing ▲

MASONRY HAMMER BIT

Holes in hard concrete, granite and other masonry surfaces can be produced economically with this Thunderbolt carbide-tipped hammer bit which can be used in any type of electric hammer. Drills are available in sizes from 3/16 to 1 inch inclusive, and suitable chucks to fit drill and any make electric hammer can be supplied. Accurate holes are drilled quickly without binding or need for changing of bit. Made by **New England Carbide Tool Co.**, 60 Brookline St., Cambridge 39, Mass.

▲ Mention Item NED-3876 when writing ▲

NAMEPLATE MARKER



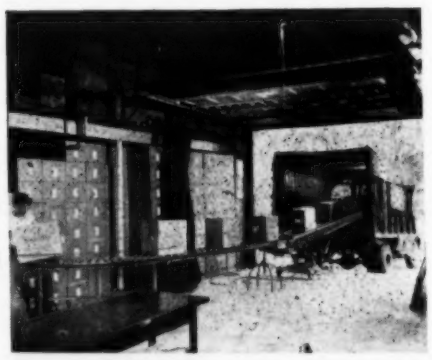
Recommended for production marking of nameplates where there are frequent changes in character alignment and nameplate size, model 222 bench style pneumatic marking machine will mark nameplates up to 5½ inches wide by 4 inches high when marking area is located in center of plate. Matthews T-Face steel type is easily removed and new characters dropped into position in type chase. Nameplates to be marked are placed in nest, face down on type. Chase is pushed under head of machine and in correct position for marking. Hand or foot control valve is actuated, and air cylinder moves pressure roll under type, forcing characters into blank nameplate panels.

Type is hardened and tempered tool steel and precision made to give controlled marking depth. Each character is centered on steel blank to avoid uneven lines. Available in 1/16, 3/32, and 1/8-inch sizes, type is especially adaptable for use with this machine. All type chases are mortised for full coverage of marking area. Made by **Jas. H. Matthews & Co.**, 3943 Forbes St., Pittsburgh 13, Pa.

▲ Mention Item NED-3877 when writing ▲

NEW PORTABLE BELT CONVEYOR

(An ad in editorial style)



A new, low-cost, fully portable belt conveyor is now being manufactured by The E. W. Buschman Co. This new conveyor The TROJAN is compact, rugged in construction and has been thoroughly tested and proven.

The TROJAN features the "safety-balanced" boom for one man operation. Requires only 5 lb. lift for adjusting. Available in two lengths, 10 feet and 15 feet plus feeder sections. Belt rides on ball bearing rollers with positive belt tracking adjustments. For complete details write for Bulletin #50. Buschman also manufactures all types of conveyors designed for your requirements.

Buschman Conveyors

The E. W. BUSCHMAN CO., Inc.
Spring Grove at Winton Place
Cincinnati 32, Ohio

▲ Mention Item NED-3878 when writing ▲

YOU'LL GET... LASTING SATISFACTION WITH SEALMASTER BALL BEARING UNITS

Take-Up Units • Flange Units • Pillow Blocks • Cartridge Units • Flange Cartridge Units

SealMaster's *exclusive combination* of features includes: PERMANENT SEAL to exclude dirt and retain lubricant . . . SELF-ALIGNING bearing assembly allows for shaft misalignment, without seal distortion . . . PATENTED LOCKING PIN prevents rotation of outer race in housing and positions bearing unit for re-lubrication . . . PRE-LUBRICATED—ready for use.

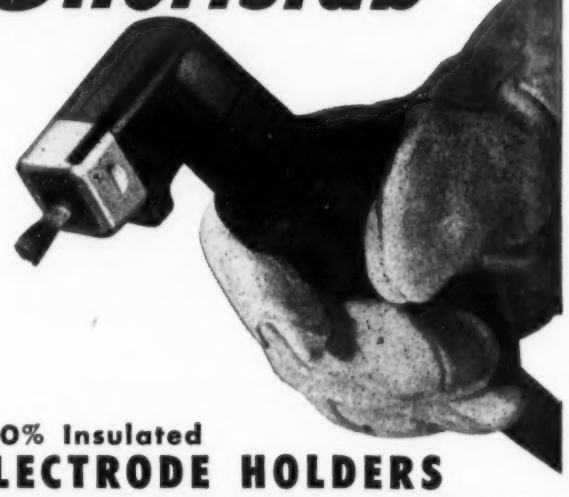
Write for SEALMASTER Catalog No. 845

BEARING DIVISION
STEPHEN S-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE, AURORA, ILLINOIS • LOS ANGELES, CALIF. • BELLEVILLE, OHIO

Factory Representatives and Dealers in All Principal Cities

▲ Mention Item NED-3879 when writing ▲

BERNARD "Shortstub"



100% Insulated ELECTRODE HOLDERS

REDUCE WELDING ELECTRODE COSTS BY AS MUCH AS 10-15 and 20 PER CENT by making it just naturally easy to deposit the TOTAL FLUXED LENGTH of all electrodes, right down to the stripped end. The reason is obvious—note that the jaws actually splice a 2 inch extension to the length of all electrodes thus providing easy manipulation of the electrode and full visibility of the welding operation while depositing the total fluxed length of all electrodes.

Reducing electrode cost is just one of the many advantages which have been engineered into "SHORTSTUB" electrode holders.

WRITE FOR DESCRIPTIVE FOLDER MFG. & PTD. BY

BERNARD WELDING EQUIPMENT CO. • 741 EAST 71st. ST. • CHICAGO 19, ILL.

▲ Mention Item NED-3880 when writing ▲

PERMANENT NON-ELECTRIC Homer MAGNETIC SEPARATORS

. . . Proven far SUPERIOR in separating Ferrous from Non-Ferrous Metals, for protection of equipment, purifying products, concentrating materials, separating ferrous from non-ferrous parts.

FOR DEPENDABLE PERFORMANCE SPECIFY . . . HOMER Permanent Non-Electric Magnetic Separators.

Homer engineers will be glad to assist you with your ferrous metal problems; they are qualified to recommend the proper separators required for your work. Write us today.

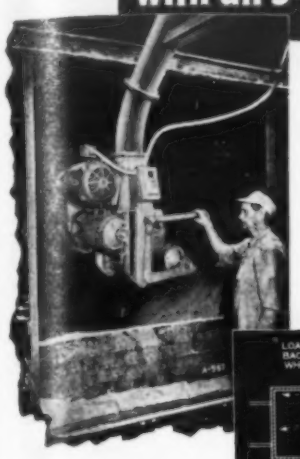
Homer The HOMER MANUFACTURING CO., Inc.
Dept. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

▲ Mention Item NED-3881 when writing ▲

IT'S A CINCH...

TO LOAD BOXCARS FASTER with an S-A SWIVELOADER



Dry, bulk material (up to 2" size) can be loaded and trimmed mechanically. The centrifugal thrower unit, swung into position inside car door, discharges material to any part of car with only part-time attention of operator. Loading is completed in a fraction of the time and cost required by hand trimming.

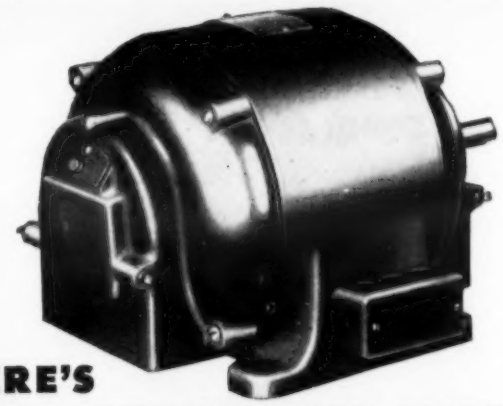
Write for Bulletin No. 1044.

STEPHEN S-ADAMSON MFG. CO.

Tellevel-Bin Level Controls · Saco Speed Reducers · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings

12 RIDGEWAY AVE., AURORA, ILLINOIS

▲ Mention Item NED-3882 when writing ▲



HERE'S MOTOR EXPERIENCE THAT CAN BE *yours*

• A high percentage of all Peerless Motors are manufactured to meet the specific operating requirements of the equipment with which they are to be used. Answering these motor problems has given Peerless engineers an experience that can be yours when you call Peerless for advice on motor applications.

You will save time, energy and money by turning your motor problems over to Peerless. Call on us by telegram or telephone. Increased engineering and production facilities can be put to work for you promptly.

THE PEERLESS ELECTRIC COMPANY • WARREN, OHIO

Manufacturers of Quality Motors for more than 55 years

Single Phase • Polyphase • Direct Current Motors

Peerless Electric MOTORS·FANS·BLOWERS

▲ Mention Item NED-3883 when writing ▲

Casting Around For Something In The Way Of A Casting...?

Then angle for one that's a lightweight

★ Like Well-Cast aluminum or magnesium castings... They're light (magnesium is 75% lighter—aluminum 35% lighter than iron). They're easy to machine. They're tough.

Well-Cast puts your product out in front with a modern metal... lightweight, featherweight.

We can show you new ways to put light metals to work on your product. 37 years of know-how. *Write for Catalog No. 47.*

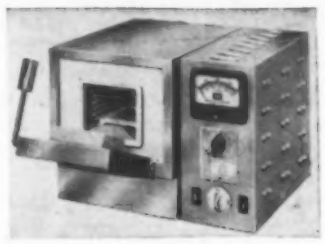
Well-Made Patterns

THE WELLMAN BRONZE & ALUMINUM CO.

2563 EAST 93rd STREET • CLEVELAND 3, OHIO

▲ Mention Item NED-3884 when writing ▲

ELECTRIC FURNACE



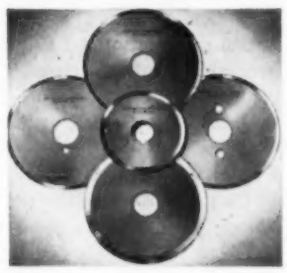
Of compact design and stainless steel construction, Blue M line of electric furnaces is equipped with Modella resistance wire elements, Magic Trigger control on automatic models and large easily read pyrometer. They can be used for heat treating, hardening and tempering in industrial plants, shops and factories.

Modella resistance wire is nonoxidizing, nonflaking and practically impervious to sulphur and its compounds; trigger control allows operator to set unit for desired temperature; and switch type heat control used on nonautomatic models provides high, medium and low settings. Millivoltmeter type pyrometer is graduated in both Centigrade and Fahrenheit degrees; scale range is from 0° to 1100° C and 0° to 2000° F.

Adequate insulation is provided by 2½-inch firebrick on all sides. Red neon light indicates furnace operation; clear light indicates action of trigger control. Furnaces can be obtained in four automatic models ranging from 550 to 1250 watts and two nonautomatic models of 750 or 1500 watts. Units are designed to operate on 115-volt alternating current but can be obtained for other voltages on special order. Made by **Modern Electric Laboratory,** 61st & S. Wentworth Ave., Chicago 21, Ill.

▲ Mention Item NED-3885 when writing ▲

CUT-OFF WHEELS



Available for all makes of rotary pipe and tube cut-off machines, these cutoff wheels are hardened, drawn, ground and tested. Disks in 7-inch diameter, 3/16 and ⅛-inch thick are furnished with 1-7/16, 1½, or 1¾-inch bore. Special size wheels can be made to specification. Made by **Continental Machine Co.,** 1954 N. Maud Ave., Chicago 14, Ill.

▲ Mention Item NED-3886 when writing ▲

INDUSTRIAL WHEELS

Recommended for use on hand trucks, wheel chairs, carts and light portable equipment, Dico Model LB-B100 lug base wheels are of bolted two-piece construction and stamped from 16-gage steel. Wheels are supplied in 2.50 x 10 size with 200-pound capacity single tube pneumatic, 210 and 240-pound capacity semipneumatic, and 500-pound capacity special round hard rubber tires. They are also available in 2.75 x 10 size with 280-pound capacity semipneumatic tires. Hub is 2-5/16-inch with ½, ⅝, and ¾-inch ball bearings. Made by **Dico Mfg. Co.,** 402 S.W. Sixteenth St., Des Moines 5, Iowa.

▲ Mention Item NED-3887 when writing ▲

NEW! FASTER!
Improved 2KW output

SIECO INDUCTION HEATER

• SOLDERING • BRAZING • HEAT TREATING

• Rugged coils for instant interchangeability.

• Controls on upper panel for greater convenience . . . maximum efficiency.

• Forced air cooling . . . air exits away from operator.

• Low voltage, grounded work coil eliminates all risk to operator.

Complete Production Setups: 1KW, 2KW, 15-100-KW Induction Heaters, Turntables, Feeding Systems, Coils.

Service & Parts

Samples Processed for Rated Companies
Literature on Request

Manufactured by
SHERMAN INDUSTRIAL ELECTRONICS CO.
505 Washington Ave. • Belleville 9, N. J.

District Representatives

NEWARK	DETROIT	CLEVELAND	BOSTON
Belleville 2-3833	University 3-9100	Main 0112	Waltham 5-6900

▲ Mention Item NED-3888 when writing ▲

7 Reasons

WHY FABRICATORS PREFER *Superior* SEAMLESS CARBON STEEL TUBING
(.010" to ⅜" O.D. Max.)

1. WORKABILITY — Machine, thread, flare, bend, slit, or flatten Superior Carbon Steel Tubing—easily.
2. TEMPER and TOLERANCE — Standard or Special tempers and tolerances to fit requirements.
3. "SUPERIOR" FINISH — See for yourself—send for a 3" sample—yours for the asking.
4. WIDE RANGE of ANALYSES — MT* 1008, MT 1010, MT 1015, MT 1118, MT 1020, MT 1025, MT 1035, MT 1075, MT 1095. *MTs—Mechanical tubing—AISI designation.
5. AVAILABILITY — Standard analyses and sizes are in stock at selected distributors.
6. "MADE to ORDER" — Every foot made to specifications—mill carries no finished stock.
7. SELECTION for END USE — Superior engineers aid in licking your tubing problems.

We are familiar with current AMS, ASTM, ARMY and NAVY specifications.

For Superior tubing on the West Coast, call PACIFIC TUBE COMPANY, 5710 Smithway Street, Los Angeles 22, California. ANgeles 2-2151

Superior THE BIG NAME IN SMALL TUBING (.010" TO ⅜" O.D. MAX.)

SUPERIOR TUBE COMPANY 2018 Germantown Avenue Norristown, Pa.

▲ Mention Item NED-3889 when writing ▲

LETS HAVE THE TOUGHEST CHAIN JOB IN YOUR PLANT

● Put HERC-ALLOY Steel Chain on the toughest job you can find. Let HERC-ALLOY service-experience records give you first hand, the undeniable answers in black and white.

Production executives and safety directors who have used HERC-ALLOY for slings or other applications agree they have yet to find an alloy steel chain superior to HERC-ALLOY.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corporation)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO
Other Factories at Angola, New York, St. Catharines, Ontario and Johannesburg, S. A.

▲ Mention Item NED-3890 when writing ▲

Your Sandblast Problems Answered

IN THIS *FREE* FOLDER

WRITE FOR YOUR COPY TODAY

Department O
Sanstorm Mfg. Co.
Santa Clara and H Sts.
Fresno, California

Please send your free Sanstorm folder

Name.....

Address.....

City..... State.....

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Simplex HYDRAULIC JACKS

Dependable performance on difficult jobs produces reports like these from Simplex Hydraulic users. Engineered for faster, safer jacking, these jacks include such features as leakproof high pressure seals of Neoprene; non-sticking ball valves; smooth acting ram of SAE X1112 steel—plus many others. Eight models; capacities from 3 to 100 tons—all safety-tested to 50% over rated capacity.

SEND FOR BULLETIN: HYDRAULIC 49

1899 50th year 1949

Simplex LEVER · SCREW · HYDRAULIC Jacks

TEMPLETON, KENLY & CO.
1010 South Central Avenue
Chicago 44, Illinois

▲ Mention Item NED-3892 when writing ▲

NOW PRECISE SUPER 40

45,000 R.P.M. 1/5 H.P.

★ NEW ALL-METAL HOUSING
★ NEW, STRONGER PRECISE QUILL
★ NEW SEALED MICRO BEARINGS

IDEAL FOR CARBIDE MICRO MILLS

GRINDS MILLS DRILLS DEBURRS ENGRAVES POLISHES FINISHES

More than a portable grinder-miller . . . this is a high-speed precision machine tool for use with or without SUPER-COOLFLEX Shaft Attachment or as Motorized Quill mounted in lathe, milling machine, drill press, etc. Thousands of cost-cutting uses on all materials from wood to the hardest steel. PRECISE tools and attachments are available for almost any production set-up. New sealed, micro-precision bearings never need lubrication. 115 volt AC-DC motor is protected by replaceable fusetron.

PRECISE PRODUCTS CO.
1346 CLARK ST. • RACINE, WIS.

Write FOR BULLETIN F-4

▲ Mention Item NED-3893 when writing ▲

LOW POWER DEMAND—BALANCED 3 PHASE with Tri-Phase

TRADEMARK
RESISTANCE WELDERS

WELDS FASTER AND BETTER

STEEL STAINLESS
ALUMINUM MAGNESIUM
MONEL INCONEL
BRASS ALLOYS

THE TAYLOR-WINFIELD CORPORATION
WARREN, OHIO, U. S. A.

Write for T-W Tri-Phase Bulletin and check for yourself on the high production value of TRI-PHASE.

TAYLOR-WINFIELD
RESISTANCE WELDERS

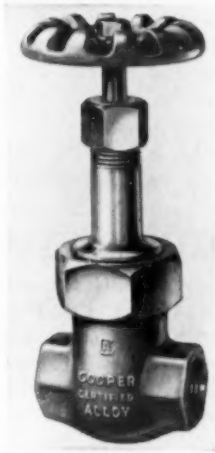
▲ Mention Item NED-3894 when writing ▲

BENCH SHEAR & ROD CUTTER

Capable of shearing sheet and bar stock up to 1/16-inch thick at any length and width, Hercules No. 0 bench shear and rod cutter is general purpose tool that can be adapted to production operation as well as to making samples and templates in tool and die work. It will cut rods square without burrs up to ¼-inch diameter, notch out templates and other odd shapes, and cut circles from 1½ to 10 inches in diameter. Interchangeable blades are tool steel. Tool is made of aluminum alloy and is light in weight and easy to carry. Distributed by **Manufacturers Products,** 3 Crest Ave., East Haven, Conn.

▲ Mention Item NED-3895 when writing ▲

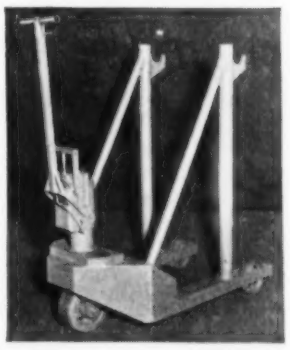
STAINLESS STEEL GATE VALVE



Obtainable in various stainless alloys in ½, ¾ and 1-inch sizes, certified gate valve is suitable for applications requiring corrosion resistance for fixed plant installations as well as for use on fabricated equipment. Construction features include union bonnet design for long service life and simplified maintenance, ball and socket point contact disks which adjust themselves in any position, and minimum of six turns of packing to assure effective sealing. Unit is simple in design, reliable in performance and meets demand for small size stainless valve. Made by **Cooper Alloy Foundry Co.,** Dept. NED, Bloy St. & Ramsey Ave., Hillside, N. J.

▲ Mention Item NED-3896 when writing ▲

HYDRAULIC LIFT TRUCK



Shown is 1000-pound capacity hydraulic lift truck for cable reels with reel carrier built on pattern of single-face pallet truck. Two base forks are provided with center opening wide enough to straddle reel to be lifted, and two uprights welded to base forks have hooks which slip under ends of shaft passing through reel hub. Elevating truck 5 inches by means of self-contained hydraulic pumping unit lifts reel so that it can be transported easily. Operator has control of load at all times since it is raised by pumping truck handle and lowered by means of finger-tip lever. Fork openings and height of pickup hooks can be furnished to meet wide range of reel sizes. Made by **LYON-Raymond Corp.,** 1886 Madison St., Greene, N. Y.

▲ Mention Item NED-3897 when writing ▲

Because they fit 99% of requirements and are easy to install or re-arrange, Logan "Stock Size" wire partitions represent a definite saving over made-to-order wire partitions or wood separations. Wire mesh construction permits free circulation of air, heat and light. Write for free catalog. **Logan Company, Inc., Builders Iron Division, 1000 Franklin Street, Louisville, Kentucky**

LOGAN Wire Partitions

LESS EXPENSIVE THAN WOOD IN FINAL COST

▲ Mention Item NED-3898 when writing ▲

Make sure your sweeps, dusters and scrubs bear this trademark!

• Pittsburgh's "Lightning Line" pays off in top performance! All demon workers—they dig in with a vengeance! Rough, tough and sturdy, these brushes work harder, better, longer! See this complete line of staple-set brushes at your favorite supplier today.

Staple-Set BRUSHES
BRUSHES · PAINT · GLASS · CHEMICALS · PLASTICS
PITTSBURGH PLATE GLASS COMPANY

▲ Mention Item NED-3899 when writing ▲

BEAT THESE PIPE JOINT TROUBLE-MAKERS

use Plasgon!

PLASGON is a flexible adhesive which permanently seals threaded and flanged pipe joints. It withstands vibration, shocks and jarring . . . considerable pressure . . . temperatures up to 350°F! It is unaffected by common solvents such as steam, kerosene, oil and gasoline . . . yet is easily removed with 80% alcohol.

Write today for free tube of PLASGON and complete information!

SAMUEL CABOT, INC., 626 OLIVER BUILDING
BOSTON, MASS.
New York Minneapolis Chicago

▲ Mention Item NED-3900 when writing ▲

NOW! FLEXIBLE PLASTIC TERMINAL INSULATION

AMPsulation

MOULDED TO ORDER!

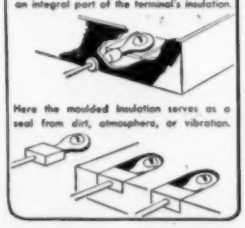
The use of plastic moulded terminal insulation gives unusual flexibility and other design advantages inherent in a moulded piece. These may involve color, size, or shape, as the cross section of the moulded sheath can be made to order.

Superior to rubber, this plastic has higher dielectric properties, "live" flexibility, and low shrinkage. Not affected by oil, grease, age, sunlight, or temperatures up to 170° F., the material is practically irremovable. A large selection of opaque colors are available for special coding or matching.

The AMPsulation process is for use in the mass production of "leads." AMP applies the plastic insulation, by its special methods, to pre-crimped terminals. Any AMP terminal or connector of any tongue size or shape can be used, whether applied by hand, power presses, or automatic machine. AMPsulation process can be suited to almost any lead you may be using, or contemplate using.

Further information concerning AMPsulation can be had by sending samples of wire and lead specifications. Complete details of any of the complete line of Solderless Wiring Devices, PRE-INSULATED terminals, automatic machines, or tools, can also be had by writing to:

UNLIMITED DESIGN POSSIBILITIES
Here, for example, the grommet has become an integral part of the terminal's insulation.



Here the moulded insulation serves as a seal from dirt, atmosphere, or vibration.

AMP
AIRCRAFT-MARINE PRODUCTS Inc.
1317 N. FOURTH STREET, HARRISBURG, PA.
Sole Canadian representative:
F. MANLEY & SONS LTD., Toronto, Ont., Canada

▲ Mention Item NED-3901 when writing ▲

Competition is becoming keener by the month and every factor that will help meet it should be employed. A dust-free plant will always produce at lower cost—other factors being equal. If you have dust, even in small amounts, it should have your immediate attention. DRACCO Dust Control creates better working conditions that contribute to LOWER COSTS. Why not consult DRACCO Engineers—they have helped many.

For Further Information Write

DRACCO CORPORATION

4053 E. 116th Street Cleveland 5, Ohio New York Office: 130 West 42nd Street

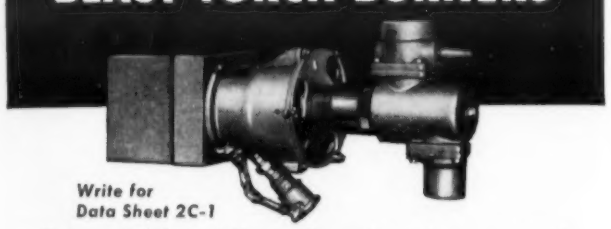
PNEUMATIC CONVEYORS • DUST COLLECTORS

Mention Item NED-3902 when writing

Bryant Industrial

MIXJECTOR*

BLAST TORCH BURNERS



Write for Data Sheet 2C-1

For gas-firing kilns. Complete burner and gas-air mixer units that are simple to adjust and control.

- Capacities 40,000 to 10,125,000 Btu/hr. for natural, manufactured and LP gases.
- Secondary air cages, combustion blocks with holders and pilot devices optional.

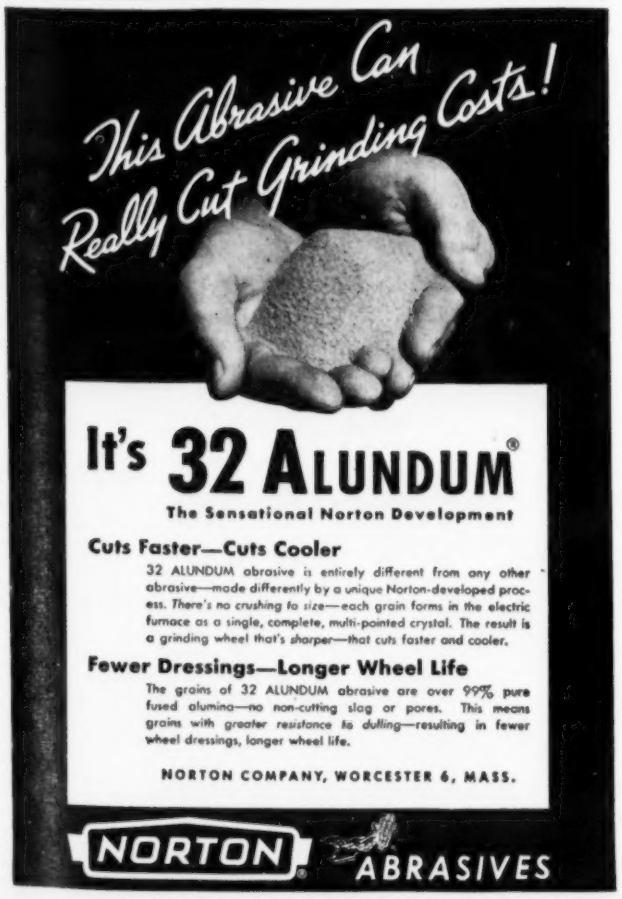
**Most compact proportional mixing device ever developed. Uses air up to several pounds to entrain zero pressure gas and deliver uniform mixture to burner.*

BRYANT INDUSTRIAL DIVISION

Affiliated Gas Equipment, Inc.

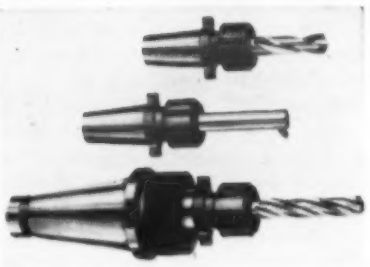
1020 LONDON ROAD • CLEVELAND 10, OHIO

Mention Item NED-3903 when writing



Mention Item NED-3904 when writing

TOOL HOLDER



Capable of maintaining accuracy and rigidity, Kwik-Switch tool holder permits rapid tool change on jobs requiring multiple operations such as drilling, tapping and boring. Master chuck fits into machine; and adapter chucks, which rigidly hold tools, fit into master chuck and fasten firmly with less than one-quarter turn of locking nut. Consecutive operations can be performed without readjusting tool or machine or changing position of work. Tool holders accommodate tools with either straight or taper shanks, and master chuck is available in straight and taper shanks to fit all standard machine tools. Made by **Universal Engineering Co.**, Frankenmuth, Mich.

Mention Item NED-3905 when writing

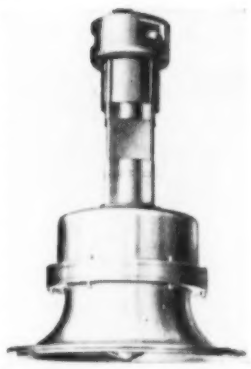
CARBIDE REAMERS

Designed with odd number of flutes to eliminate opposing crushing load on cutting edges, these Atrax solid carbide reamers also feature radius relief chamfer and

highly lapped lands. They are available in sizes from 1/16 to 1 inch in diameter, with smaller reamers of solid carbide rod and larger reamers having carbide head brazed to steel shank. They can be used on difficult-to-machine alloys and metals, including steel with hardness up to 65 Rockwell C. Made by **The Atrax Co.**, 239 Day St., Newington 11, Conn.

Mention Item NED-3906 when writing

SOUND GENERATOR



Developing frequencies from 500 to 22,000 cycles per second, output of over 300 watts and intensity levels up to 165 decibels, model U-4 Sonic generator is intended for laboratory, pilot plant and production use. Sonic energy generated can be used for difficult dust, fume and mist collection problems where these high intensity sound waves effect agglomeration of extremely fine particles in gas stream. Aggregates thus built up can be collected efficiently by cyclones. Other applications include emulsion forming and breaking, killing bacteria and increasing seed germination.

Unit is powered by 12,500-revolution per minute 1½-horsepower explosionproof universal electric motor which can be connected conveniently to any 115-volt 50-60-cycle current source. Compressed air consumption is 150 cubic feet per minute of free air delivered at 5 pounds per square inch. Made by **Ultrasonic Corp.**, 61 Rogers St., Cambridge 42, Mass.

Mention Item NED-3907 when writing

AMAZING NEW

Non-Toxic

Non-Inflammable

CLEANER and DEGREASER

AQUA-TURGE with Emulsite

A new material scientifically developed by the Chemical Engineers of Brooks Boiler Treatment Company, to Eliminate the Use of:

- **Inflammable and Toxic Solvents**
- **Harsh Caustics and Alkalies**
- **Soaps**
- **All other Inferior Detergents**

Aqua-Turge, with Emulsite, provides safe, instant action cleaning and degreasing for industrial plants, offices and institutional establishments. It is a formulation of strong emulsifiers that first, penetrate; second, emulsify; and finally disperse completely any and all *soil, grease, oil* or *film*. Aqua-Turge is very economical to use, because of its stability and highly concentrated form. Why not send for a free booklet on this new material, or, better yet, have one of our field engineers give you a demonstration?

BROOKS BOILER TREATMENT CO.

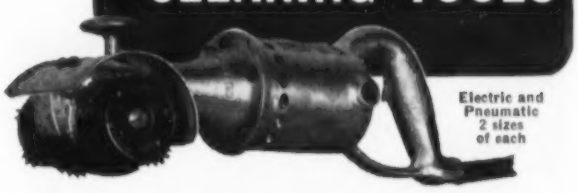
3304 East 87th Street • Cleveland 4, Ohio

Mention Item NED-3908 when writing

Remove SCALE, PAINT, RUST Quickly . . . Easily

USE **AURAND** CLEANING TOOLS

For any hard metal or stone surface—iron—steel—brick—concrete—etc.



Electric and Pneumatic 2 sizes of each

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For further information, address Dept. 14

AURAND MFG. & EQUIP. CO.

2643 Colerain Avenue • CINCINNATI, OHIO

Mention Item NED-3909 when writing

FLOATLESS MAINTENANCE-FREE LEVEL CONTROL

OPERATION
Two probe rods reach into the tank to the levels where pump-on and pump-off operations are required. Actual contact of the probes with the liquid operates Photoswitch Control which makes and breaks the pump-control circuit.

UNLIMITED LIFE
No Moving Parts to Wear Out.

SAFETY
Low Voltage in the Probe Circuit.

MAINTENANCE-FREE
No Vacuum Tubes.

SIMPLICITY
No Floats, Seals, or Moving Elements.

PHOTOSWITCH Level Controls, effective for all conductive liquids, are available for single-level indication or control, on and off pump control, and boiler feedwater control.

Write today for Level Control Bulletin PF479NED

PHOTOSWITCH INCORPORATED

PHOTO-ELECTRIC & ELECTRONIC CONTROLS FOR EVERY INDUSTRIAL PURPOSE

CAMBRIDGE, MASS. • *District Offices* IN ALL PRINCIPAL CITIES

Mention Item NED-3910 when writing

Yes... **an oil seal that's tailor-made to *resist* corrosion**

Here's why: Clipper Seal's molded body is entirely nonmetallic. To meet special conditions, the garter spring which holds the lip of the seal in contact with the shaft can be furnished in various corrosion-resistant metals.

Other Clipper Seal advantages: They are resilient—will conform even to a slightly out-of-round cavity. The soft, pliable inner lip always maintains a light, but positive sealing pressure on the shaft, minimizing wear.

Clipper Seals are quick and easy to install, may be had in split or endless types, are available in sizes from ¼" I.D. up to 66" O.D. If you have a special sealing requirement, write Johns-Manville, Box 290, N. Y. 16, N. Y.

Johns-Manville PACKINGS & GASKETS

Mention Item NED-3911 when writing

NOW

ALLEN

Hex-Socket Screws in STAINLESS STEEL

Available from Distributors' Stock

Non heat-treated, non-magnetic 18-8 stainless steel hex-socket set screws and socket head cap screws NC threads are now standard and quickly obtainable from your Allen Distributor.

HEX-SOCKET SET SCREWS: Thirty-three popular sizes, cup point, now standard.

SOCKET HEAD CAP SCREWS: Thirty-eight popular sizes, flat point, now standard.

WARNING Allen-TYPE screws aren't necessarily Allen-MADE. Be sure to get genuine ALLENS in the black and silver box.

Other sizes, threads, points, and types of stainless steel are also obtainable on special order.

ALLEN MANUFACTURING CO. ALLEN HEAD

Hartford 2, Connecticut, U.S.A.

NEW YORK, CLEVELAND, DETROIT, CHICAGO, LOS ANGELES

Mention Item NED-3912 when writing

Nugent Shaft Oiler

PUTS A STOP to the danger and extra work of shaft oiling

With a Nugent shaft oiler, you'll be able to oil overhead bearings without the dangerous and useless work of climbing a ladder among belts and pulleys. One of these oilers will pay for itself in a week's time.

The Nugent shaft oiler is a two quart oil can with a 1/8" I.P.S. aluminum tube spout as long as 12 feet. The spout can be bent to any desired angle.

Check your phone directory or write direct.

NUGENT TRADE MARK Est. 1897

Wm. W. Nugent & Co., Inc.

421 N. Hermitage Ave. CHICAGO, 22, ILLINOIS

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

Mention Item NED-3913 when writing

A-79

ANOTHER W&T PRECISION INSTRUMENT . . .

The W & T Precision Dial Manometer

The W&T Precision Dial Manometer answers the problem of conveniently measuring pressure with a sensitivity of 1 part in 10,000.

This sturdy, compact instrument, which is widely used for wind tunnel work, power plant test stands and in gas turbine testing, has a large easy-to-read dial. It is custom calibrated in any pressure units over various ranges up to a maximum of 200 inches of mercury.

In addition, the W&T Precision Dial Manometer possesses these outstanding advantages:

Accuracy .....1 part in 1000
Scale length ..45"
Case .....pressure tight, metal for flush mounting.
Full protection against over pressure.
Measures gauge pressure, vacuum and differential pressure.

This instrument with its sensitive response and precision results is typical of a wide variety of pressure instruments of all types — from low pressure indicators to altimeters — manufactured by W&T. If you have a problem in pressure measurement, write, telling us the details. We'll be glad to help.

WALLACE & TIERNAN PRODUCTS, INC.

ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS

Belleville 9, New Jersey • Represented in Principal Cities

Mention Item NED-3914 when writing

RETRACTABLE TROUBLE LIGHT

Usable in plants, factories and warehouses, this Retracto-Reel portable retractable light can be fastened to wall or ceiling or laid on its side with three semisuction cup rubber feet providing scratchproof protection. Light is insulated and completely caged and can be used within radius of 25 or 45 feet from reel rack. Neoprene-jacketed kink-proof cord locks at any desired length and retracts when tug on cord releases ratchet. Light can be interchanged with female plug for use with power tools. Reel is equipped with cord and male plug which can be inserted into any convenient 110-volt outlet. Made by **M. Black Mfg. Co.**, 302 North Third St., Philadelphia 6, Pa.

Mention Item NED-3915 when writing

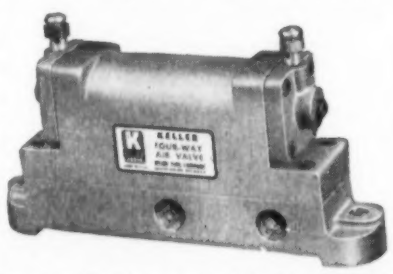
BATTERY CHARGER

Three or six-cell industrial lead-acid batteries of 550-ampere-hour capacity or less at 6-hour rate can be charged at maximum rate of 60 amperes by model AR60 battery charger. It is fully automatic since it has voltage relay to shut down initial fast rate to safe soaking rate when gassing point has been reached. Operator need only set dials and press starter button. Units are available for operation on 115 or 230-volt alternating current. Made by **Baldor Electric Co.**, 4376 Duncan Ave., St. Louis 10, Mo.

Mention Item NED-3916 when writing

FOUR-WAY AIR VALVES

Actuated by poppet type control buttons which exhaust air from either end of balanced piston, this line of four-way air valves is designed to control double-acting air cylinders in Airfeedrils and other air tools or fixtures requiring fast accurate control. Piston is used only as means of operating faced slide valve which is actual seal for directional control of air flow. These valves can be obtained with 1/4, 1/2, and 1-inch pipe threads with air capacities of 30, 90 and 350 cubic feet per minute respectively. They can be bench mounted or mounted as integral part of fixture with remote control of operation. Made by **Keller Tool Co.**, Dept. N, Grand Haven, Mich.



Mention Item NED-3917 when writing

NEVER BEFORE! A SWITCH SO SMALL SO LIGHT (6½ oz.) • SO LOW PRICED ($3.75) AS LINEMASTER COMPACT FOOT SWITCH

Write for folder and prices NOW.

Let us quote on your special switch requirements.

Our brand new Linemaster "COMPACT" combines unbelievable low price with the finest, most efficient design now available. It's small and light for maximum adaptability. The absolutely fool-proof actuating mechanism has amazing sensitivity which permits versatile operation by foot, finger, knee or elbow. Ruggedly constructed of long lasting heavy gauge steel, featuring a handsome black crackle finish and non-skid base, "COMPACT" switch has thousands of potential profit-making industrial applications.

SIMONDS MACHINE CO., INC.

33 Viking Terrace • Southbridge, Mass.

Mention Item NED-3918 when writing

Electroline -FIEGE WIRE ROPE CONNECTORS *The* **LAST WORD** *in*

SAFETY—No heat, acids or complicated equipment required for installation. Ordinary mechanic's tools do the job, safely, even in chemical plants, powder plants and mines, where other methods would be prohibited.

MAKE CONNECTIONS SAFE . . . because they have the highest holding strength of any known wire rope or strand connectors.

SAVINGS—In Installation, because unskilled labor can easily do the job . . . and quickly. In Use, because they prolong wire rope life by damping vibration and overcoming rope fatigue at entrance to fitting . . . and because they are reclaimable.

Note ease of installation.

Send for new descriptive catalog.

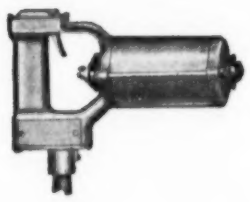
Simply slip the sleeve over the cable, spread the strands, insert and drive in the plug then apply the socket. See what a solid and permanent joint you have by looking at it through the inspection hole put there for the purpose.

Electroline Company

4121 SOUTH LA SALLE STREET • CHICAGO 9, ILLINOIS

Mention Item NED-3919 when writing

Call in SYNTRON to Reduce Costs— Speed Up Work



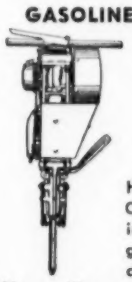
ELECTRIC HAMMERS

Drill - Cut - Chip - Scale - Point

Ten times as fast as by hand

OTHER SYNTRON POWER TOOLS

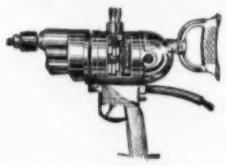
GASOLINE HAMMER PAVING BREAKERS 100% Self Contained



Heavy - duty Concrete busting, cutting, digging, tamping, driving, etc.

No auxiliary equipment to tow around.

"Portable" ELECTRIC DRILLS



Midget models, end handle models, breast plate models. Available in capacities from 3/16" to 1". Standard and heavy duty types.

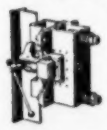
GRINDERS AND SANDERS

Heavy-duty, high-speed tools for brushing, scaling, snagging castings, surfacing concrete, etc.

SCREWDRIVERS

Universal-motored tools for production work. Capacities from 1¼" to 2½" wood screws and ¼" to ⅜" bolts.

CONCRETE VIBRATORS



Speed up the placing of concrete.

"Pulsating Magnet" models for thin wall forms, burial vaults, etc.

Flexible shaft types, gas and electric motor driven, for mass concrete—thick walls, dams, etc.

OTHER PRODUCTS

Bin Vibrators
Vibratory Feeders
Weigh Feeders
Long Conveyors
Grizzlies
Screens
Rotary Pumps

Write for illustrated literature

SYNTRON CO.

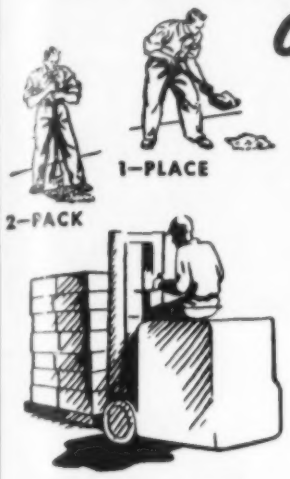
405 LEXINGTON HOMER CITY, PA.

Mention Item NED-3920 when writing

QUICK-PERMANENT

CONCRETE FLOOR REPAIRS!

Quick-Floor



FOR INSTANT . . . PERMANENT PATCHES, repairs, etc. . . . just PLACE and PACK "QUICK-FLOOR" . . . it's done . . . complete and ready to use . . . without delay or interference . . . "QUICK-FLOOR" IS PERMANENT.

MANY 10 YEAR OLD, HEAVY DUTY, INSTALLATIONS still in good shape . . . this means the ANSWER to Concrete Floor defects is . . . "QUICK-FLOOR" . . . the original patcher (and surfacer) since 1938.

ORDER A DRUM TODAY

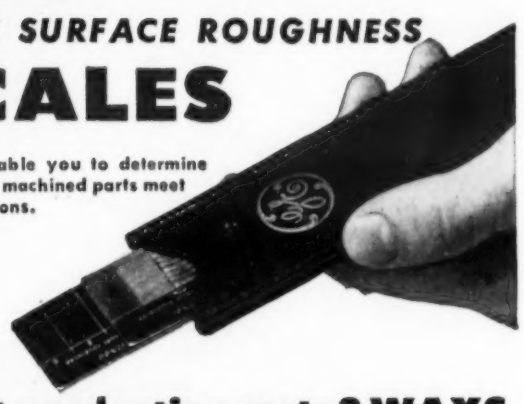
Results *Unconditionally* Guaranteed

Quick-Floor
MADE BY DURA-TRED COMPANY

367 N. Central Park Blvd., Chicago 24, Ill.
VAn Buren 6-2171

▲ Mention Item NED-3921 when writing ▲

NEW
G-E SURFACE ROUGHNESS SCALES



Scales enable you to determine quickly if machined parts meet specifications.

...cut production costs 3 WAYS

1. Engineers and designers need only to refer to scales to specify finishes—reduces delays caused by misunderstandings.

2. Inspectors can handle additional work because they can use sight and touch to compare the finish of machined parts with specified finishes.

3. Machinists turn out improved work because they can avoid making unnecessarily fine or too-rough finishes.

IMMEDIATE SHIPMENT. List Price $16.55. Write to Special Products Div., Apparatus Dept., General Electric Co., Schenectady, N.Y.

GENERAL ELECTRIC

▲ Mention Item NED-3922 when writing ▲

UP YOUR PROFITS DOWN YOUR COSTS

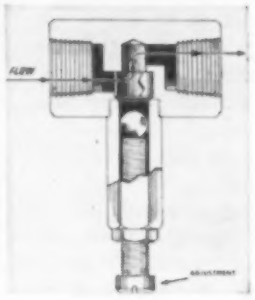
PORTELVATOR
the
HANDY HAMILTON
PORTABLE ELEVATING TABLE

ELEVATES • LOWERS • TRANSPORTS
Table locks securely wherever stopped.
WILL NOT TIP OR SLIP
A work bench when and where you need it.
WRITE FOR BULLETIN
giving detailed data
DO IT NOW

THE Hamilton TOOL COMPANY
SUPER SENSITIVE DRILLING MACHINES · TAPPING MACHINES · PORTELVATORS
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

▲ Mention Item NED-3923 when writing ▲

VELOCITY LIMITING VALVE



Easily connected into any air or gas line, infinitely adjustable velocity limiting valve instantaneously shuts off line flow whenever velocity or volume exceeds desired pressure setting up to 100 pounds per square inch. In operation, stainless steel ball is pulled up against its seat and held in closed position by line pressure whenever flow exceeds setting. When pressure diminishes, ball drops off its seat and resets itself. Screwing adjusting screw in or out of valve lowers or raises pressure setting at which valve closes. Valve is available in ¼-inch pipe size, with other sizes on special order, and it is made of brass bar stock with stainless steel parts. Made by **Pneu-Trol Devices, Inc.**, 3122 N. California Ave., Chicago 18, Ill.

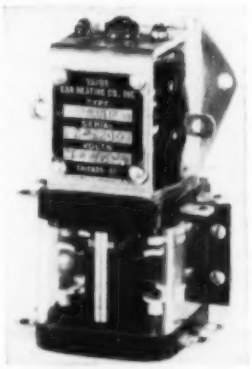
▲ Mention Item NED-3924 when writing ▲

FILTER-TRANSFER UNIT

In addition to providing for transfer of fluids, this portable machine can be used also as filter. Equipment includes motor driven pump, metal-edged strainer and micronic type filter, all mounted on wheeled truck. Valves are so arranged that, in process of transfer of fluid, either one, both or neither filter can be used. Paint, coolant, kerosene, solvents, hydraulic fluids, lubricating oils and other materials can be handled. Standard capacities range from 5 to 80 gallons per minute. Units can be plugged into standard electrical outlets. They are available with suction and discharge hose assemblies. Made by **J. N. Fauver Co.**, 47 W. Hancock Ave., Detroit 1, Mich.

▲ Mention Item NED-3925 when writing ▲

SOLENOID ACTUATED RELAY



Each time contact is made or broken, bridging contact arms of Vapor Pony two-pole, normally open or closed, solenoid actuated relay clean themselves by wiping action. Transparent dustproof cover affords additional protection to contact points. Metal parts are plated for protection against corrosion, contact bases are molded phenolic, and open adjustments are sealed against vibration. Open or closed, contact points withstand vibration of 4 gravitational units. Coil draw is about 5 watts, and relay is available in large variety of coil resistances with contact rating of 5 amperes at 125 volts direct current. It can be supplied in sizes for 12 to 220-volt direct current. Made by **Vapor Heating Corp.**, 4501 W. Sixteenth St., Chicago 23, Ill.

▲ Mention Item NED-3926 when writing ▲

Sturdily Built for RUGGED USE

The Productimeter Model "H" Heavy Duty line is designed for hard usage and long service. Constructed of highest quality materials . . . they are rigidly tested before leaving our factory.

There is a Productimeter for every counting job . . . always accurate . . . always dependable. They eliminate all "guess-work" . . . insure profitable operations and more efficient use of man-hours in your plant.

PRODUCTIMETERS *Count Everything*
Send for Catalog No. 100.

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin • 122 Orange Street, Providence 3, R. I.

▲ Mention Item NED-3927 when writing ▲

WEDGE Split CHILL RINGS LOWERS Cost of WELDING PIPE, TUBE or PARTS

It is imperative in the face of keen competition to make every possible saving. WEDGE Chill Rings with the patented SPLIT Feature are contributing to lower costs for many. They make it possible to weld pipe, tube or parts faster and at the same time produce STRONGER joints. Do you have a welding problem that WEDGE Engineers may be able to help you with—they have reduced costs for others and perhaps they can for you. It will pay to investigate.

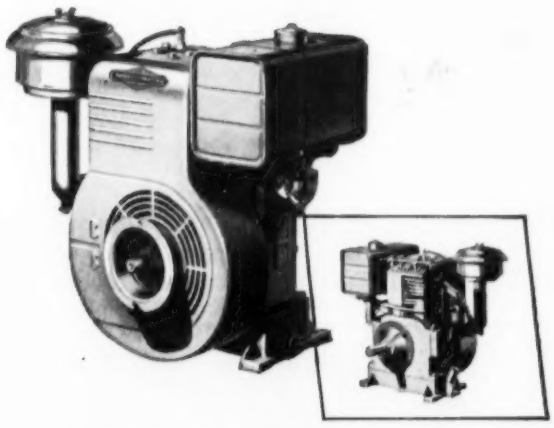
Write for Further Information

WEDGE PROTECTORS, INC.
3973 Jennings Road Cleveland 9, Ohio

Use WEDGE Chill Rings-Thread Protectors

▲ Mention Item NED-3928 when writing ▲

The Engine Is as Important as the Machine It Powers



It's not enough for a machine or appliance to be skillfully designed, carefully made, and expertly assembled. It has to be *powered* right, too—with the kind of power that will insure the best performance possible year after year.

That's why it will pay you to insist on Briggs & Stratton engines — recognized the world over for dependable 4-cycle, single-cylinder, air-cooled power.

No other engines in the field can assure you such efficient, dependable, low-cost performance. No other engines have satisfied so many customers. No other engines are so universally preferred by manufacturers, dealers, and users alike.

BRIGGS & STRATTON CORPORATION
Milwaukee 1, Wis., U. S. A.

4 CYCLE BRIGGS & STRATTON GASOLINE ENGINES
Preferred Power FOR INDUSTRIAL CONSTRUCTION RAILROAD AND FARM EQUIPMENT

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PAID FOR ITSELF IN 73 HOURS OF USE

on a tough nut running job

ROTARY ELECTRIC I-R IMPACTOOL DID IT WITHOUT KICK OR TWIST

A tractor dealer, servicing cleat-type machines, ran up 500 nuts and cap screws per tractor . . . requiring 10 hours of fatiguing work with hand wrenches. The I-R Impactool was demonstrated and purchased after the job time was cut in half. The dealer figured that the Impactool paid for itself on 14 units . . . or 73 hours of use . . . an easy way to put more profits into the cash register.

KIT No. 1—IMPACTOOL, with standard equipment, plus a complete assortment of attachments in a Handy De Luxe Case. 110V or 220V, AC or DC models available.

A MULTI-PURPOSE TOOL

Actually, the Impactool saves many additional hours of time and hard work because the powerful rotary impact blows take the drudgery out of many other service and repair operations such as reaming—tapping—screw driving—wood boring—drilling—hole sawing—driving and removing studs—extracting broken studs and screws—wire brushing—drilling masonry—etc.

You can increase your profits with these easy-to-use, time-saving Impactools that everyone is talking about. Ask your Ingersoll-Rand distributor for a free demonstration.

Ingersoll-Rand
11 Broadway, New York 4, N. Y.
ORIGINATOR OF IMPACTOOLS— air and electric

432-18

▲ Mention Item NED-3932 when writing ▲

For the Best in GEARS SPROCKETS-RACKS

It's "Industrial"

We're handling some mighty big assignments for many of America's large Machinery Manufacturers. Our production facilities are extensive. Our equipment is 95% new. Our workmen are skilled. Precision is our watchword. The net result to you is gears, sprockets and racks that fit your assembly—delivered when and as you want them. Your inquiries will have our immediate attention.

Make it a Habit to Send Us Your Gear Orders

The Plant that Quality and Service Built

INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET CHICAGO 24, ILLINOIS

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FREE 44-PAGE BOOK

Shows How To Cut Materials Handling Costs

...based on ELWELL-PARKER'S 43 Years' Experience

Entitled "Industrial Logistics," this book explains how scientific materials handling will insure maximum economies in general industry. Individual booklets are also available for 4 special industries: Food, Paper, Metal Stamping & Forging, Railroads.

SEND COUPON NOW!

THE ELWELL-PARKER ELECTRIC COMPANY
4502 St. Clair Avenue • Cleveland 2, Ohio

Please send materials handling book for General Industry ☐
Also booklet for Food Industry ☐ Paper Industry ☐
Railroads ☐ Stamping & Forging ☐

Name_____
Address_____
City_____ Zone____ State____

▲ Mention Item NED-3934 when writing ▲

NARROW BAND CHOPPER

Capable of converting pure direct current into pulsating direct current or alternating current, type 242 chopper permits output of thermocouples, strain gages and other low level direct current sources to be amplified by means of alternating rather than direct current. Unit is single-pole double-throw square wave generator which will operate at any frequency between 45 and 65 cycles per second. Features include liquid filling, special shielding and make-before-break contacts. In air, nominal rating is 10 volts, 0.001-ampere direct current; in liquid maximum rating is 1 volt, 0.001-ampere direct current. Made by **Stevens-Arnold Inc.**, 22 Elkins St., South Boston 27, Mass.

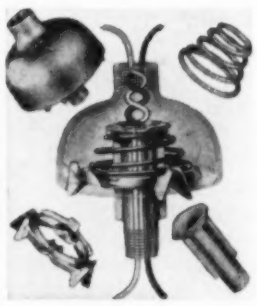
▲ Mention Item NED-3935 when writing ▲

DESK CHAIR

Design of this Do/More posture chair encourages correct sitting posture without restricting freedom of movement. Comfort is furnished by use of soft resilient molded foam rubber in seat, back and arm rests and by spring unit in seat. Chair is constructed of steel and aluminum, finished in wide choice of colors and upholstered in top grain leather or attractive cloth fabrics. Made by **Domore Chair Co.**, Dept. F, 225 Monger Bldg., Elkhart, Ind.

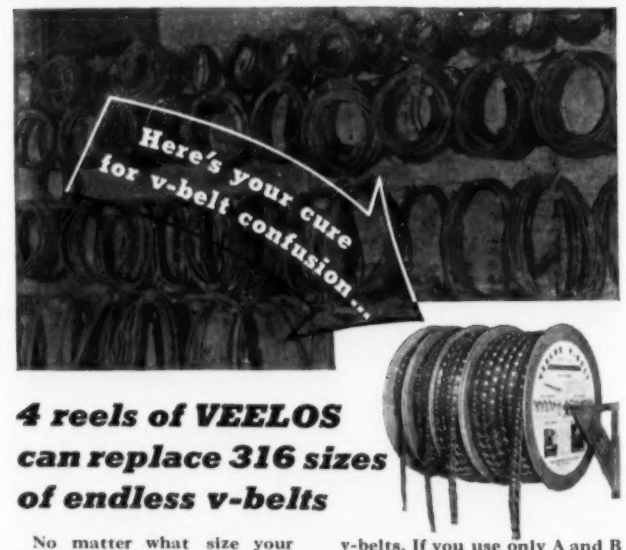
▲ Mention Item NED-3936 when writing ▲

SHOCK ABSORBERS



Permitting movement in all directions to assure maximum vibration absorption, these spring-loaded shock absorbers provide shockproof mounting for industrial lighting fixtures, fans, motors and other equipment. Units consist of three cast-iron parts and steel spring. Guide ribs on stem prevent rotation, and spring seat collar at top prevents stem from passing through opening in spring plate under maximum spring compression. They are available in two Junior and three heavy duty sizes with load capacities of from 1½ to 80 pounds. Made by **Thompson Electric Co.**, 1101-38 Power Ave., Cleveland 14, Ohio.

▲ Mention Item NED-3937 when writing ▲



4 reels of VEELOS can replace 316 sizes of endless v-belts

No matter what size your v-belt inventory, Veelos can cut it—drastically!

Let's assume that you use O, A, B and C widths. With only four reels of Veelos you can make up more than 316 sizes of endless v-belts. If you use only A and B sizes, your entire v-belt inventory will be complete with just two reels. Any length belt is quickly uncoupled from a reel, made endless and installed.

VEELOS THE LINK V-BELT

FREE VEELOS CATALOG shows how Veelos can bring many distinct v-belt advantages to your plant. See page after page of illustrations of Veelos at work in industry after industry. Full engineering data is given. Write for your free copy today.
MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

ADJUSTABLE TO ANY LENGTH
ADAPTABLE TO ANY DRIVE

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ALLIGATOR BELT LACING

*Every Tooth a Vise**

★ For Transmission and Conveyor Belting of all kinds. Excellent for Package Conveyors.
★ Separable and smooth on both sides.
★ 12 Sizes: For belts from 1/16" to 5/8" thick—and *any width.*
★ Made of Steel, "Monel", "Everdur".

Order From Your Supply House

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street • Chicago 44, Illinois

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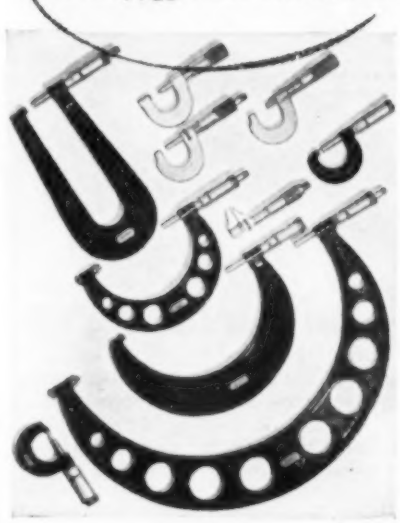
ONLY STARRETT MICROMETERS PROVIDE *ALL* THESE ESSENTIAL FEATURES



SATIN CHROME FINISH
eliminates glare, retards corrosion, increases speed and accuracy.

HI-MICRO FINISH
on faces of anvils and spindles insures accuracy.

THREADS GROUND FROM SOLID
hardened and stabilized for lasting accuracy.

QUICK READING FIGURES
Every graduation on the thimble numbered.

DECIMAL EQUIVALENTS
conveniently marked on the frame or thimble.

SLEEVE ADJUSTMENT
Simple adjustment of sleeve maintains accuracy.

TYPES FOR EVERY NEED
A complete choice of sizes, types and shapes.

For complete information, write for Starrett Catalog No. 26 "ED."

Starrett — *Standard of Precision*
MECHANICS' HAND MEASURING TOOLS AND PRECISION INSTRUMENTS • DIAL INDICATORS • STEEL TAPES • HACKSAWS AND BAND SAWS • PRECISION GROUND FLAT STOCK
Buy Through Your Distributor

THE L. S. STARRETT CO. • *World's Greatest Toolmakers* • **ATHOL, MASSACHUSETTS, U.S.A.**

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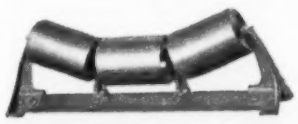
SPACE DOES NOT PERMIT.

the showing of everything we make to improve your handling and processing operations. From our diversified line you can select a unit to help you do the job quicker and better than you are doing it today.

A complete line of conveyors, chains, bucket elevators, feeders, screens, crushers and pulverizers, coolers and dryers, packers . . designed to suit your particular requirements.

Rotary Bin Check Valve

Shown below are a 3-pulley Belt Idler and a section of Spiral Flight.



3-Pulley Belt Idler

Spiral Flight

JEFFREY
THE JEFFREY MANUFACTURING CO.
952 N. Fourth St., Columbus 16, Ohio

▲ Mention Item NED-3941 when writing ▲

Engineered for top efficiency

Whether your heating requirements call for an exact local heat application—or for a large expanse, Watlow Units perform perfectly. Watlow Strip Units are available in 1½" to 3" widths, 4" to 72" lengths, 115 V to 230 V ratings. Strip unit assemblies, in many types and sizes, are recommended for efficient convection heating.

Send for the Watlow Catalog.

SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW
ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

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This table model shredding machine...

- Destroys confidential papers by turning them into unrecognizable shreds
- Turns your accumulated waste and confidential paper into needed packing material
- Requires no skill and little maintenance to operate
- Is noiseless, dustless and free from litter
- Delivers long, clean shreds
- Includes every necessary feature for safety, utility and versatility
- Will shred materials in various forms such as sheets, rolls, small pieces and crumpled waste . . . paper, foil, cellophane and many other materials

Send for prices and illustrated literature today!

THE *Shredmaster* CORPORATION
207 Willoughby Avenue, Brooklyn 5, N. Y.
A Division of Self Winding Clock Company

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ASK AN EXPERT ABOUT FAST, LOW-COST METAL CUTTING ...YOUR VICTOR DISTRIBUTOR

Want to make sure you're using the best blade for whatever type metal or non-metal you're cutting? Then see your Victor distributor. His long experience qualifies him as an expert on hack saw blades, and he'll be glad to give you any help you need. He can show you how to make every stroke count with Victor blades... how to cut faster, easier and more economically.

While you're at it, ask him for a free copy of the Victor Metal Cutting Booklet for your pocket or tool kit and the Victor Wall Chart for your shop. Both are packed with helpful hints on selection, care and use of hand and power hack saws.

5709

VICTOR SAW WORKS, INC.
MIDDLETOWN, N. Y., U. S. A.
Makers of Hand and Power Hack Saw Blades, Frames and Band Saw Blades.

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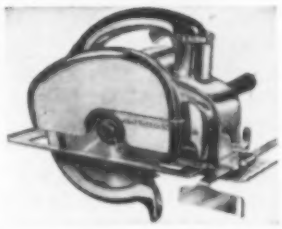
PORTABLE ELECTRIC SAW



Having 8½-inch blade and G-E motor which drives blade at 5300 revolutions per minute and develops 2⅛ horsepower, portable electric saw has power and capacity for handling everyday jobs in cutting wood, sheet metal, stone, tile or composition. Saw will cut 2⅛-inch plank at 45 degrees or will make straight cut of 3-inch depth. Tool is balanced for one-hand operation; and equalized torque principle, in which motor and saw blade turn in opposite directions, keeps saw from jolting or twisting when starting. Unit has telescoping blade guard, lifetime lubricated bearings and totally enclosed trigger type safety switch on handle. Standard equipment includes metal carrying case, wrench for removing saw blades and combination rip and cross cut blade. Blades for cross cutting, ripping, abrasive cutoff and diamond wheel can be supplied on order. Made by **American Floor Surfacing Machine Co.**, 598 S. St. Clair St., Toledo, O.

▲ Mention Item NED-3945 when writing ▲

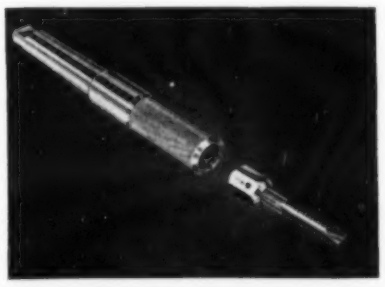
CIRCUIT BREAKER

Available as either circuit breaker or circuit interrupter of high interrupting capacity, No. ML-1 unit can be obtained in special enclosures to meet any service application. Enclosures include dust-resisting, raintight, weatherproof, dustproof and explosionproof styles. Ampere range is 15 to 50 amperes on 600-volt alternating or 250-volt direct current; or 70 to 100 amperes on 250-volt alternating or 125-250-volt direct current.

Unit employs thermal-magnetic tripping mechanism wherein thermal element holds harmless momentary overloads but trips before wire insulation overheats on continuous overloads. Magnetic element trips quickly on shorts to localize damage. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ Mention Item NED-3946 when writing ▲

TAP CHUCK



Developed for occasional power tapping jobs, Dahlstrom tap chuck does away with center and wrench method of tapping on lathe or drill press. Floating tap assures threading accuracy. Included in set are seven adapters in sizes from 8/32 to ½-inch. Adapters are quickly interchanged and are held in friction grip. Tap chuck is made with Nos. 2, 3 or 4 Morse taper. Overall length is 8⅝ inches. Set of chuck and adapter lists for $21.50. Made by **Dahlstrom Mfg. Co.**, Dept. A, 2520 Larpenteur Ave. W., St. Paul 8, Minn.

▲ Mention Item NED-3947 when writing ▲

YOU CAN BE **SURE**.. IF IT'S Westinghouse

The new Westinghouse FP-2 Electrode is a . . .

High-speed welding tool... one you can burn with higher amps—until the stub is red hot. And you can...

"Drag" it or "skip" it because the wire melts away faster than the heavy coating. What's more, the FP-2 is an...

All-position a-c—d-c electrode for better welding with all types of machines.

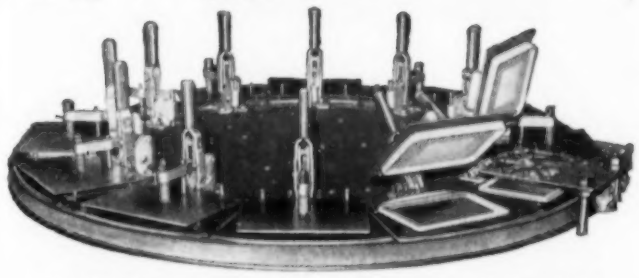
For full details send for page 29.1 (Catalog 26-020). Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21531

Westinghouse

▲ Mention Item NED-3948 when writing ▲

▲ Mention Item NED-3949 when writing ▲

The Merry-Go-Round that Never Broke Down..



No, *this* "Merry-go-round" never broke down, but it *does* break production bottlenecks every day, thanks to versatile De-Sta-Co Toggle Clamps!

It's a high-production assembly fixture for a new plastic ink pad. Here, the bottom of the case is being bonded to the body. Requirements: fast bonding cycle . . . positive clamping pressure for a perfect bond . . . precise alignment of work pieces for accurate assembly. Rapid toggle action, sure holding pressure, rugged durability and well-engineered design make De-Sta-Co No. 207U Toggle Clamps the tool designer's logical choice for this application.

And they're the logical choice, too, for holding parts during
• Assembly • Welding • Riveting • Machining
of plastics, metal and other materials. Whatever your work-holding problem, there's a De-Sta-Co Toggle Clamp that's a "natural" to solve it. The complete line of more than 40 stationary and portable De-Sta-Co Toggle Clamps is shown in Clamp Catalog No. 49. Send for your copy today, and the name of our stocking representative nearest you.

DETROIT STAMPING CO.
360 MIDLAND AVE. DETROIT 3, MICHIGAN

▲ Mention Item NED-3950 when writing ▲

new!

5 KVA SPOT WELDER and 120-AMPERE ARC WELDER in *ONE* COMBINATION UNIT
—both for considerably less than the usual cost of separate units!

DELTA "Dual Weld" COMBINATION WELDER

Price subject to change without notice

Free bulletin tells . . .

. . . how—*with a single machine*—you can spot weld, braze, and solder!
. . . how you can spot weld fine wire just as efficiently as 16-gauge steel!
. . . how Delta features make your welding jobs easier and more economical!

Send for your copy today!

TEAR OUT COUPON AND MAIL TODAY!

DELTA MANUFACTURING DIVISION
ROCKWELL MANUFACTURING COMPANY
MILWAUKEE 1, WISCONSIN
616F E. VIENNA AVENUE,

Send me free bulletin describing the Delta Combination Welder and other new Delta welders.

Name .....
Title .....
Company .....
Address .....
City ..... ( ) State .....

DELTA MILWAUKEE

▲ Mention Item NED-3951 when writing ▲

from dispenser to product

...one simple step

a remarkable new labeling method!

KUM-KLEEN is cutting labeling costs for more and more users every day. *Kum-Kleen* is the pressure-sensitive label that can be automatically dispensed at any desired speed for instant application. No moistening. No loose labels. A 10-minute test in your own plant will prove what *Kum-Kleen* can do for you. Write for details.

Kum-Kleen

ADDRESS: DEPT. NED-6
AVERY ADHESIVE LABEL CORP.
MONROVIA, CALIFORNIA

▲ Mention Item NED-3952 when writing ▲

HERE'S THE NEW...

WESTON A-C Clamp-Ammeter and VOLTMETER

5 Current ranges to 1000 Amperes

3 Voltage ranges to 700 Volts

Voltage terminals recessed, with insulated screw-type connectors on leads • Heavily insulated jaws accommodate conductors to 2" dia. (bare or insulated) • Pointer stop for indicating motor starting currents • Trigger operation for convenience.

Ask your Weston representative for full particulars, or write . . . WESTON Electrical Instrument Corp., 617 Frelinghuysen Ave., Newark 5, N. J.

WESTON *Instruments*

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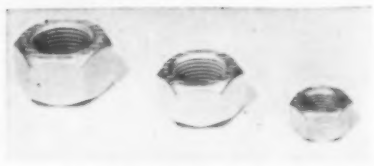
SELF-LOCKING NUTS



Available at cost of common nut fastenings, this line of lock nuts is supplied in American Standard regular semifinished, National Coarse Thread Series, ranging from ¼-20 to 2-4½ and American Standard light semifinished, National Fine Thread series, ranging from ¼-28 to 1½-12 (*See NED June* 1944). Custom-made modifications of standard series in special materials, thicknesses, finishes and shapes are also supplied. Features of line are rigid tolerances and one-piece unit. Elliptical top design affords heavy spring gripping action on two sides of bolt and permits repeated use without damage to threads of bolt or work. Nut is vibration-tested, and grip is unaffected by extreme temperature variations or lubricants. Made by **Stover Lock Nut and Machinery Corp.**, 100 Bushkill Dr., Easton, Pa.

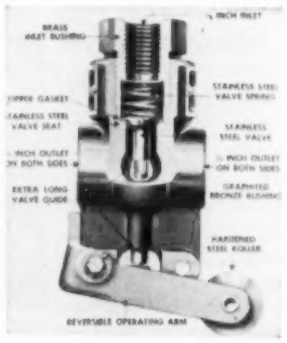
▲ Mention Item NED-3954 when writing ▲

HYDRAULIC BENCH PRESS

Powered by 3-horsepower 220-440-volt three-phase 60-cycle motor, type FM self-contained hydraulic bench press can be obtained in 5, 13, 18 and 20-ton capacities. Motor, hydraulic pump, valves and piping are enclosed in housing of unit with pushbutton switch on side to control motor-driven pump. Hand lever actuates and releases ram which has stroke of 9 inches and is mounted on chromium plated piston which travels in steel cylinder. Downstroke is 100 inches per minute, and return travel 125 inches per minute on 5-ton press and slightly less on larger sizes. Distance from 10 x 16-inch platen to ram is 10¾ inches. Made by **Munton Mfg. Co.**, 9398 W. Belmont Ave., Franklin Park, Ill.

▲ Mention Item NED-3955 when writing ▲

AIR VALVE



Metal chips and other scrap material can be removed quickly and cleanly when Air-Saver air valves are built into machine tools or mounted on equipment already in operation. Valves can be mounted in any position to operate at any angle and are not affected by machine vibration. They are precision-built leakproof units designed to give split-second air control, and they provide ample volume of air for operation of multiple as well as single jets. Applications include use on punch presses, diecasting machinery, drill presses, broaches and similar machine tools. Made by **Palmer-Shile Co.**, 16015 Fullerton Ave., Detroit 27, Mich.

▲ Mention Item NED-3956 when writing ▲

PUT AIR TO WORK WITH PRESSURE PRINCESS

THIS portable single cylinder, piston type air compressor is a heavy duty, compact unit ideally suited for factory maintenance work. Equipped with spray hose and gun, it cuts time and cost of painting, inside and out. Handles any spray liquid. Compressor can be used for tire inflation and fleet lubrication and is suitable for many industrial purposes.

If your product incorporates an air compressor investigate the adaptability of Pressure Princess.

Write For Literature

THE CAMPBELL-HAUSFELD CO.
193 RAILROAD AVENUE HARRISON, OHIO

▲ Mention Item NED-3957 when writing ▲

DOWN go maintenance costs after installing

ACRO *Dual Visibility* LUBRICATORS

- Easy to install
- Single adjustment
- Automatic feed
- No floats, no valves, no moving parts

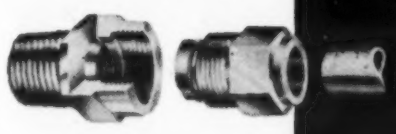
These efficient "maintenance men" constantly hold the correct oil level to eliminate motor bearing failure due to faulty oiling. They save costly repairs . . . keep machines on the job. No drip, no waste, no splattering, pay for themselves in oil savings alone. ACRO LUBRICATORS operate six to twelve months without attention, immediately reduce maintenance costs.

Write for further interesting facts

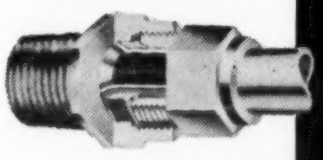
ACRO Metal Stamping Co.
337 E. Reservoir Ave. • Milwaukee 12, Wis.

▲ Mention Item NED-3958 when writing ▲

NO OTHER



FITTING IS



ALL THREE

EASIEST TO CONNECT

Self-flaring—no cracked tubing—no flaring tools needed. A turn of the nut shears off collar and clamps it onto tube; further tightening makes flared seal.

TIGHTEST SEALING

Can be tightened further due to 50% greater strength of special alloy brass. Greater vibration resistance.

PERFECTLY LEAKPROOF

37 degree flare for maximum strength. Dryseal threads. Inverted joint. Can be taken apart and reassembled many times without weakening seal.

Uniflare
TUBE FITTINGS
A Product of Scovill

Fully approved by Underwriters' Laboratories, Inc. Available from your distributor in all standard shapes in sizes from ⅛ in. through 1 in. Write for free folder to Dept. 20.

A. SCHRADER'S SON
Division of
SCOVILL MANUFACTURING CO.
Incorporated
BROOKLYN 17, NEW YORK

▲ Mention Item NED-3959 when writing ▲

Increase Production of Fines by 300% with

STURTEVANT CENTRIFUGAL AIR SEPARATORS

Accurate Separation of Fines from 40 to 325 Mesh and Finer . . . Output Capacity from ¼ to 50 Tons Per Hour

Records prove that Sturtevant Air Separators cut separation costs of various materials by as much as 300%. In addition, they provide additional economies by reducing power costs up to 50%. That's why you'll find hundreds of these separators in all types of industries. Ruggedly constructed of quality materials, Sturtevant Air Separators keep on working day after day with minimum maintenance. They are available in many sizes from ¼ to 50 tons per hour output.

Investigate cost-cutting Sturtevant Air Separators for your plant. Write for catalog and information, today.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

▲ Mention Item NED-3960 when writing ▲

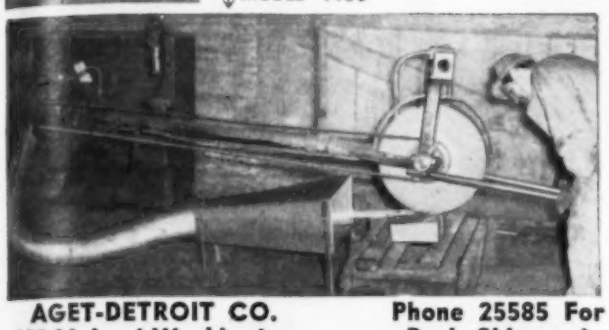
STOP DUSTS

. . . . with low cost, unit type DUSTKOPS (250 to 3600 cfm). There is a DUSTKOP to match every dust source.

Send for complete information now. To save time, give us a description of the dust trouble. No obligation.

←MODEL 335

↓MODEL 1150



AGET-DETROIT CO.
201 Main at Washington
Ann Arbor, Michigan

Phone 25585 For Rush Shipment From Stock

▲ Mention Item NED-3961 when writing ▲

test this three-way

Vibration Protection

FREE sample kit demonstrates locking efficiency of . . .

SHAKEPROOF LOCK WASHERS

Because exclusive tapered-twisted teeth provide spring tension, strut action and curved line bite for holding, bracing and anchoring, Shakeproof Lock Washers will protect the fastenings in your product from the hazards of vibration encountered in shipment, in handling and in use. Prove it to yourself . . .
Write for free test kit today!

Request Kit No. 21 which contains a wide range of types and sizes for your own testing purposes.

SHAKEPROOF inc.
fastening Headquarters
DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Avenue, Chicago 39, Illinois

▲ Mention Item NED-3962 when writing ▲

TREATED TO BE TOUGH!

. . . machined to be smooth

Hard surfaces resistant to wear...tensile strength great enough to take shock loads ...resistance to corrosion and oxidation—these are the characteristics of Atlas Roller Chain after going through the special "Nicarb" process.

This process gives parts subject to excessive wear a strength proved by Tinius-Olsen Testing Machines to exceed that which would ever be expected of it in actual operation . . . confirms the strong construction and metallurgical properties of Atlas Roller Chain.

Details are available in our new catalog. Write for your copy today.

ATLAS

ATLAS CHAIN
MANUFACTURING CO., PHILA. 24, PENNA.

▲ Mention Item NED-3963 when writing ▲

STRAIN RELIEF BUSHINGS

Accommodating small appliance wires, Nos. 2-P and 3-P nylon strain relief bushings provide strain relief and act as insulating grommets which can absorb push, pull and torque to increase life and usefulness of product. They are made from duPont high temperature nylon and are Underwriters' Laboratories listed and approved. Applications include improving appearance and efficiency of electric clocks, fans, lamps, fractional horsepower motors and similar devices. Made by **Heyman Mfg. Co.**, 99 Michigan Ave., Kenilworth, N. J.

▲ Mention Item NED-3964 when writing ▲

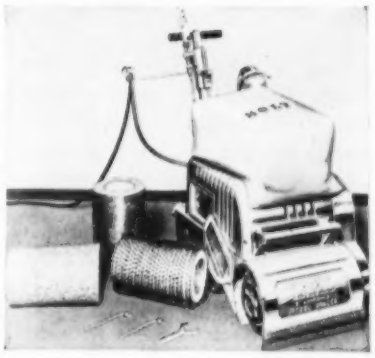
STEAM CLEANING MACHINE

Designed especially for small industrial plants, fleet garages and small contractors, Hypressure Jenny steam cleaner develops 80-120 pounds working pressure with 45-gallon per hour capacity. Unit is instant starting and steaming, and has selective compound and fuel feed to give best results for individual jobs. Automatic nozzle control mechanism permits operator to stop and start machine at cleaning job. All units are oil fired and electric motor driven. Capacity can be increased to 240 gallons per hour by means of optional accessory. Made by **Homestead Valve Mfg. Co.**, P.O. Box 84, Coraopolis, Pa.

▲ Mention Item NED-3965 when writing ▲

STEEL WOOLING MACHINE

Steel wooling, cleaning, sweeping, polishing, scrubbing, scaling and degreasing operations on any type of floor can be accomplished through use of model 12 tandem-motored steel wooling machine. Attachments for each purpose are quickly interchangeable. Recommended for use on wood floors before sealing, machine will also remove stains on marble, terrazzo and other stone and mineral floors. Powered by two 1½-horsepower motors, machine features Holt automatic belt tightener and high suction vacuum. Made by **Holt Mfg. Co.**, 679 Twentieth St., Oakland 12, Calif.



▲ Mention Item NED-3966 when writing ▲

EX-CELL-O

TOOL GRINDERS

Ex-Cell-O builds tool grinders for sharpening high speed steel, cast alloy and carbide tools. Illustrated to left is Ex-Cell-O Style 46 Tool Grinder. For further information, write for Bulletin No. 46262, Ex-Cell-O Corporation, Detroit 32, Michigan.

XLO

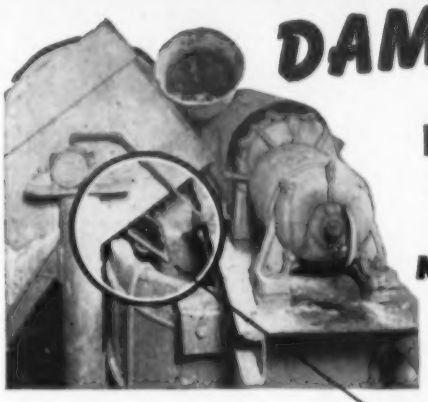
EX-CELL-O CORPORATION

49-22

DETROIT 32, MICHIGAN

▲ Mention Item NED-3967 when writing ▲

STOP TRAMP IRON DAMAGE with DINGS PERMA-PLATE MAGNETS



LEFT—This Dings PERMA-PLATE Magnet has paid for itself dozens of times by keeping bolts, nuts, etc., from ruining costly pulverizer.—National Lead Co., Perth Amboy, N. J.

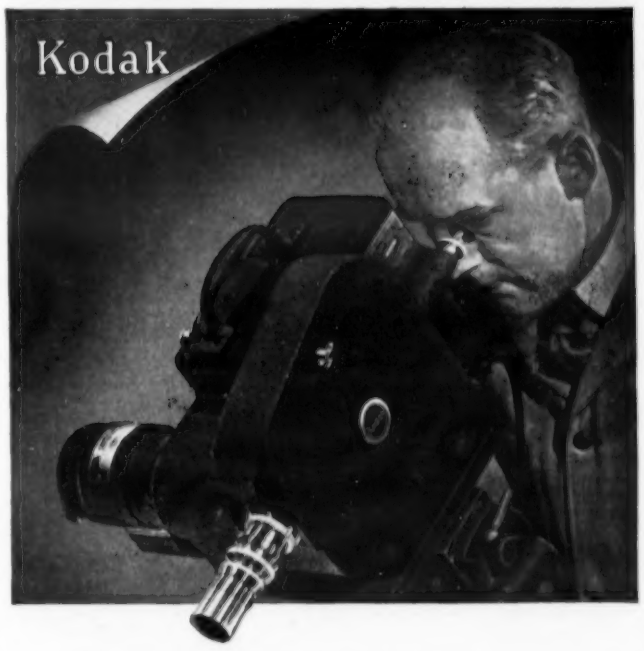
Low Cost . . . Powerful . . . Permanent . . . Highest Grade Alnico . . . No Maintenance . . . Lightweight

FOR low cost, *permanent* magnetic protection against costly tramp iron damage to vital machinery, install powerful Dings PERMA-PLATE Magnets in chutes, ducts, trays, spouts, over conveyor lines, etc. These high grade Alnico plate magnets are your best bet for maximum tramp iron removal. They work equally well with wet or dry materials, and are unaffected by atmospheric conditions in or out-of-doors. Dings PERMA-PLATE Magnets are simple to install, easy to clean and *their high magnetic strength is guaranteed for mechanical life of the installation!* Available in widths from 4" to 72" in 2" increments, special sizes on request. Write for Bulletin.

Dings "HIGH INTENSITY"

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave.
Milwaukee 14, Wis.

▲ Mention Item NED-3968 when writing ▲



HOW TO GET A GOOD LOOK AT ACTION TOO FAST TO SEE

MANY machine parts move faster than the eye can see. Yet to see that they operate smoothly and have long life—they should be studied in operation under the stress of high speed.

This is the work of the Kodak High Speed Camera. With it you can take up to 3000 clear, well-defined pictures a second on regular 16mm. movie film. Projected at the standard 16 frames a second, this lets you study the motion at almost 1/200th actual speed.

Such studies have already spotted reasons for excessive wear, noisy operation, vibration, and early part failure. They have pointed the way to better product design and more efficient production methods.

The Kodak High Speed Camera is inexpensive to use—takes no specialized skill to operate. If you would like to see how it could help you, we shall send you our booklet, "Magnifying Time," which gives full particulars. Just mail the coupon.

EASTMAN KODAK COMPANY
Industrial Photographic Division, Rochester 4, N. Y.
"Kodak" is a trade-mark

Eastman Kodak Company 83
Industrial Photographic Division
Rochester 4, N. Y.

Please send me your booklet on the Kodak High Speed Camera, "Magnifying Time."

Name_____
Firm_____
Street_____
City_____ State_____

▲ Mention Item NED-3969 when writing ▲

For Positive Filtration

of lubricating, hydraulic, fuel oils, solvents, etc.

Alsop "Disc-Pak" Filters completely remove all undesirable solids and minute particles, sludge, and moisture. The replaceable-cartridge type elements are made in eight different grades of porosity, making available practically any specific degree of fineness of filtration even to the removal of particles in the sub-micron stage. The progressive density of construction stops increasingly finer particles as they penetrate to the varying depth and prevents quick surface clogging.

"Disc-Pak" Filters are made in capacities up to 3600 gals. per hour for pipe line connections or complete with pumps.

SEND FOR THIS FREE CATALOGUE
Our catalogue #144 contains complete and detailed information on "Disc-Pak" Filters. Write for your free copy.

The Alsop Engineering Corp.
406 East Rd., Milldale, Conn.

ALSOP ENGINEERING CORPORATION
Filters, Filter Discs, Pumps, Tanks, Mixers, Agitators

▲ Mention Item NED-3972 when writing ▲

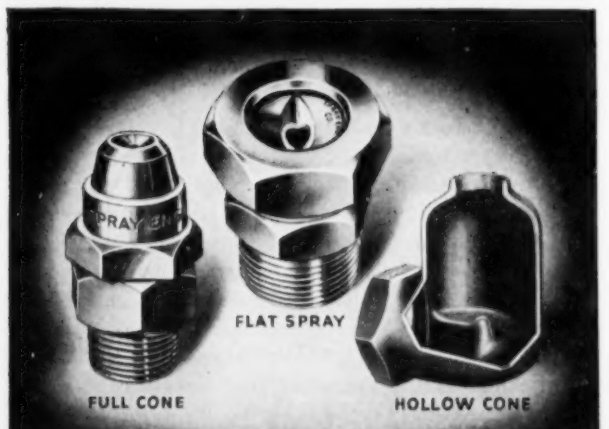
* OLSON CONVEYORS

SINGLE UNITS—COMPLETE SYSTEMS

• Put material handling on a continuous basis with Olson conveyors. In single units or in complete systems, Olson conveyors meet every requirement for lifting, lowering or on-the-level handling. Call Olson today for details on standard or custom-engineered equipment . . . for the answer to your problem through continuous material flow.

SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave., Chicago 47, Illinois

▲ Mention Item NED-3973 when writing ▲

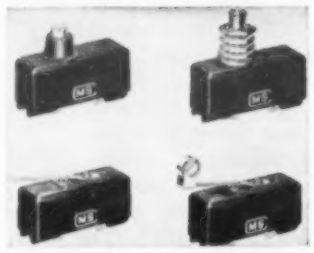


SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ Mention Item NED-3974 when writing ▲

HIGH-CAPACITY SWITCHES



Five actuator designs offer wide selection of mechanical actuation in this small precision type A snap-action switch. Listed by Underwriters' Laboratories for steady state current rating of 20 amperes on 125, 250, or 460-volt alternating current, switches have inrush capacity of 75 amperes at up to 460 volts. Switch actuators are permanently attached to cover of plastic case so that switch always operates at same point in plunger movement. Available in solder, screw type bottom faced, screw type side faced or Micro Latch separable terminals, switches are also supplied with double-throw contact arrangement which permits use as normally-open or normally-closed switches. Made by **First Industrial Corp.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

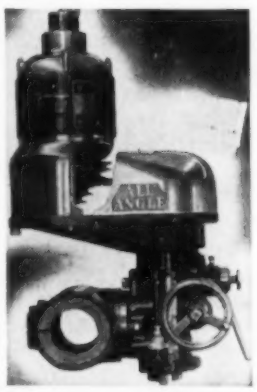
▲ Mention Item NED-3975 when writing ▲

SLOPED BOTTOM BOX & STAND

Simplified small parts handling with reduced labor costs is made possible by sloped bottom box and stand which employs gravity flow of parts from box to tray to eliminate hand operations. Equipment is operated by hand lever located on box, release of which permits parts to slide down to waist-high tray on stand which is accessible to standing or sitting workmen. Box is of all-steel construction and is equipped with crane lugs for convenient pick-up and carry. Bottom slide opening is locked securely by lever until released. Units can be built to fit any type lift truck. Made by **Palmer-Shile Co.**, 16015 Fullerton Ave., Detroit 27, Mich.

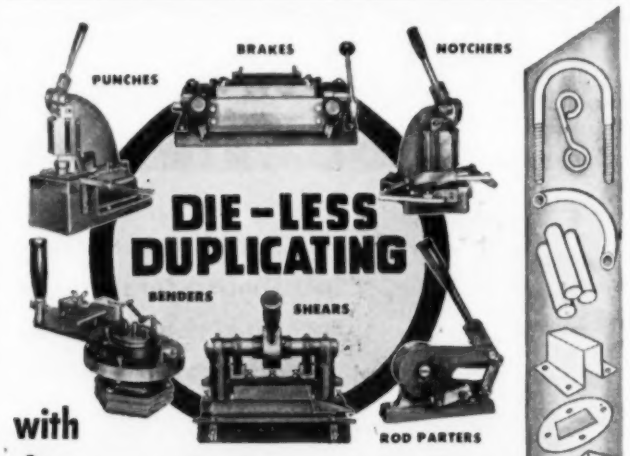
▲ Mention Item NED-3976 when writing ▲

MILLING ATTACHMENT



Applicable to various types of milling machines, planers and lathes, improved type 4 milling attachment is precision built for use on intricate milling, drilling, boring and grinding jobs in metalworking shops. It is powered by 1½-horsepower motor which supplies ample power for high speed carbide cutting, and "all-angle" flexibility permits working at different angles without changing work setup. Unit is equipped with precision bearings. Positive direct drive and planetary back gear give 3:1 reduction through involute 14-tooth spline drive which transmits uniform power without side pull. Made by **Fray Machine Tool Co.**, 517 W. Windsor Rd., Glendale, Calif.

▲ Mention Item NED-3977 when writing ▲



with di-acro PRECISION MACHINES

Eliminate dies . . . speed production . . . in both your experimental and quantity run duplicating operations. An unusually wide variety of both simple and intricate parts can be precision made by "DIE-LESS DUPLICATING" with the individual or co-operative application of DI-ACRO Precision Machines (see examples at right). DI-ACRO Machines are now offered in a total of six types and 21 different sizes, including two new units—a power driven Shear and a hydraulic Bender.

SEND FOR 40 PAGE CATALOG
ENGINEERS—DESIGNERS—PRODUCTION MEN should all have this informative catalog which contains technical data covering DI-ACRO Machines and our offer of "Die-Less Duplicating" Engineering Service to aid in solving design and production problems... WRITE FOR YOUR COPY TODAY.

DI-ACRO O'NEIL-IRWIN MFG. CO.
354 8th Avenue, LAKE CITY, MINN.

▲ Mention Item NED-3978 when writing ▲

LOW-COST
VOLTAGE REGULATION
for feeders handling
up to 120 kva

Here is an induction regulator that is ideal for maintaining constant voltage on long secondary feeders of small and medium capacity. Particularly suited to small plants and large office and apartment buildings. Keeps illumination at normal levels where lighting and widely varying power loads are supplied by common feeders.

Available in six kva ratings and for 120 to 600 volts. Will provide 10 per cent regulation, raise and lower, on circuits handling 12 to 120 kva. Fully automatic. Dry-type, natural-draft ventilated—they can be installed indoors without vaults.

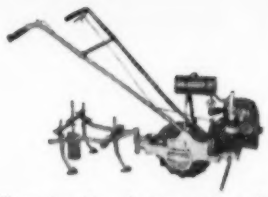
Write for Bulletin GEA-3057B. *Apparatus Department, General Electric Co., Schenectady 5, N. Y.*

Type AIRS induction regulator, typical of size 3.6 kva and smaller

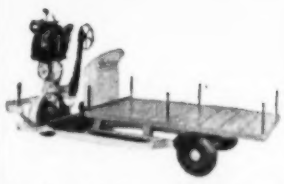
GENERAL ELECTRIC

▲ Mention Item NED-3979 when writing ▲

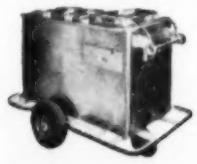
TOP QUALITY EQUIPMENT
ROLLS ON TOP-QUALITY
GENERAL
INDUSTRIAL PNEUMATICS



More traction, longer wear with sturdy, deep-ribbed Generals on hand-operated garden tractors by Lodge & Shipley, Cincinnati, Ohio.



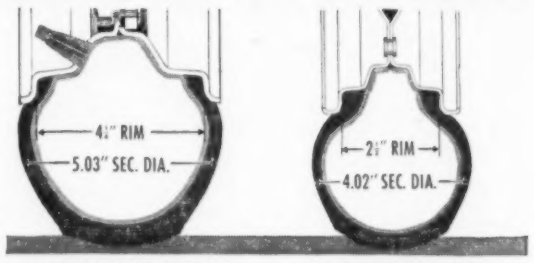
Maximum load capacity and extra cushioning for equipment, load and operator on power trucks by Truck-Man, Inc., Jackson, Mich.



Wide-Base Generals roll smoothly, silently; protect floors and floor coverings on food carts by Swartzbaugh Mfg., Toledo, Ohio.

High-speed motor scooters by Globe Mfg. Co., Joliet, Ill., ride easier, safer, on low-pressure wide-base General Industrials.

GENERAL'S WIDE BASE
MAKES THE BIG DIFFERENCE



WIDE BASE	NARROW
More Air Volume	Less Volume
More Load Capacity	Less Capacity
More Stability	Less Stability
More Cushioning	Less Cushioning

Available in assemblies of tires, tubes and wheels. Sizes O. D. 8" to 23"—200 to 2000 lb. load capacity.

SEND FOR NEW CATALOG . . .
Dept. 4, The General Tire & Rubber Company, Akron, Ohio

THE GENERAL TIRE & RUBBER CO.
Akron, Ohio

▲ Mention Item NED-3980 when writing ▲

Bulletin 700 A-C Solenoid Relays

- Silver-alloy contacts need no maintenance
- "N. O. or N. C." universal contactor

Bulletin 700 A-C Solenoid Relays offer a versatile line of small solenoid-operated switches for applications requiring compact contactors of unfailing dependability. Available in single- and multiple-pole constructions up to and including a twelve-pole unit. Universal types can be changed from normally open to normally closed by merely changing connections. Write for complete information. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

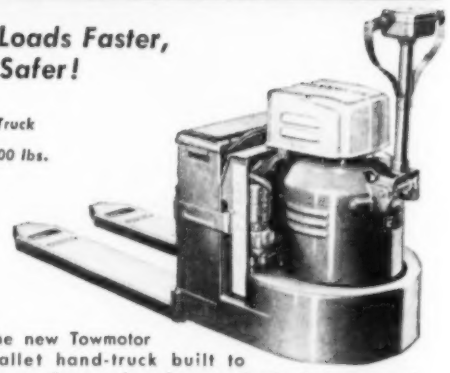
ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▲ Mention Item **NED-3981** when writing ▲

IT'S A NEW TOWMOTOR ELECTRIC HAND-TRUCK

Moves Loads Faster, Easier, Safer!

Pallet Hand-Truck Model "W" Capacity, 4000 lbs.



Here is the new Towmotor electric pallet hand-truck built to Towmotor's exacting engineering standards. It is compact and highly maneuverable. Operates 25% faster than average hand truck*. Rapid hydraulic lift. Easily detachable forks. 3-point suspension. Write today for complete information.

*BY ACTUAL TEST WITH RATED LOAD.

TOWMOTOR CORPORATION, Div. 25, 1226 E. 152nd St., Cleveland 10, Ohio
Representatives in all Principal Cities in U. S. and Canada

TOWMOTOR
THE ONE-MAN-GANG ®

FORK LIFT TRUCKS and TRACTORS
RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

▲ Mention Item **NED-3982** when writing ▲

Cut Glove Costs with "PLASTIGLUV"

The Industrial Safety Glove that **WEARS LIKE IRON!**

Knit Wrist, Safety Cuff and Gauntlet, also Ladies' Styles

Plastic Coated and Impregnated for Long Hard Wear

Get more hours of wear per dollar with Belle City's tough new "Plastigluv"! Full cut and comfortable, with cotton fabric base, "Plastigluv" is superior in every respect to neoprene rubber coated gloves and ordinary leather palm gloves.

Note these outstanding "Plastigluv" features: High dielectric strength For longer lasting—no exposed seams • Acid, alkali, heat and flame resistant • Impervious to most oils • Waterproof • Abrasion-resistant • Non-slip finish • Conforms to hand's natural grip, effecting smooth palm grasp • Complete flexibility makes it serviceable for any job • Easily washed—dirt can't penetrate • *Ideal for use in all industries.*

Factories in Racine, Wis. and Kewanee, Ill. • *Write for information and prices*

BELLE CITY GLOVE COMPANY
112 EAST CHESTNUT ST. • CHICAGO 11, ILLINOIS

▲ Mention Item **NED-3983** when writing ▲

PIPE MARKERS

Conforming to ASA standard No. A13, Quik-Label pipe markers are printed with names of fluids in large black letters on correct ASA background colors for rapid identification of piping systems. Each marker is 2¼ x 9 inches and is supplied on card 2¾ x 9 inches. Weather and waterproof, they stick without moistening to bare or covered pipes; and since each card is equipped with starter-strip which automatically releases part of label, application is rapid. Markers are available with printing running width of label or lengthwise for applying along part of pipe visible to eye.

Available also are 23 conduit markers printed with all standard NEMA voltages from 110 through 4800 volts. Made by **W. H. Brady Co.,** Dept. 50, 815 N. Third St., Milwaukee 3, Wis.

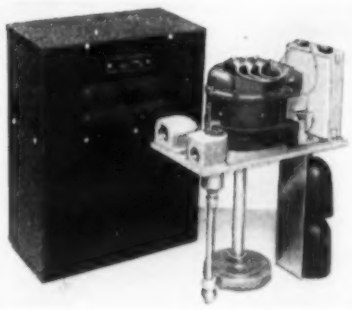
▲ Mention Item **NED-3984** when writing ▲

PILLOW BLOCKS

Available in nine shaft sizes ranging from 1-3/16 to 2-15/16 inches, LAO series pillow blocks are equipped with Mechani-Seal ball bearings which embody labyrinth type closure plus external slinger member to throw off contaminants when operating at normal speed. For added protection at low speeds or under adverse atmospheric conditions, combination synthetic rubber and felt washer has been incorporated as integral member of seal. Bearing has spherical outside diameter and spherical housing which provides unrestricted self-alignment in any direction. Housing is compact single piece reinforced at all stress points. Made by **Fafnir Bearing Co.,** Dept. B, New Britain, Conn.

▲ Mention Item **NED-3985** when writing ▲

CONDENSATE DISPOSAL UNIT



Providing efficient and trouble-free disposal of small quantities of condensate from air conditioning equipment, model No. 2 condensate disposal unit features fully automatic control, compact rustproof construction, quiet operation and ball bearing electric motor. It is equipped with bronze centrifugal pump, 1½-gallon brass receiver, float-operated switch, check valve on outlet side of pump and 1/40-horsepower single-phase capacitor-start motor which operates on 115-volt 60-cycle current. Pump is capable of delivering 4¼ gallons per minute at 0 pounds per square inch and has shut-off pressure of 12½ pounds per square inch. Inlet is ¾-inch and outlet ½-inch pipe thread size. Made by **Eastern Industries, Inc.,** 296 Elm St., New Haven 6, Conn.

▲ Mention Item **NED-3986** when writing ▲

STANDARD IRONBOUND HANDLING UNITS FOR MANY JOBS

● Ironbound "stock" units are built to meet many requirements. If a stock unit will not solve your problem, an Ironbound engineer is ready to solve it for you with a specially designed unit. Ask for General Catalog GP-7; Roll handling bulletin RT-8.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

Ironbound

SKIDS • SEMI-LIVE SKIDS
DOLLIES • FLOOR TRUCKS

▲ Mention Item **NED-3987** when writing ▲

"There's no substitute for the ZIP!"

The Zip-Lift is the standout in quality — the original wire rope hoist with full magnetic push-button control. Tens of thousands of P&H Zip-Lifts are now in service. Why not benefit by this proved experience? Add one to your handling now — to boost production and cut costs! They're available for immediate delivery. For full details, send for Bulletin H20-4.

P&H ZIP-LIFT

HANDLE IT *Thru-the-Air* AT LOWER COST

P&H ELECTRIC HOISTS
4537 West National Avenue
Milwaukee 14, Wis.

HARNISCHFEGER CORPORATION
HOISTS • WELDING ELECTRODES • MOTORS • P&H • EXCAVATORS • ELECTRIC CRANES • ARC WELDERS

▲ Mention Item **NED-3988** when writing ▲

FAST IN TWO SENSES

Because the Super-Concrete Staves lay up readily, Neff & Fry Storage Bins are erected fast; i.e., in a comparatively short time.

The staves interlock together firmly. The tiers are securely bound with heavy galvanized steel rings. The materials are enduring. So Neff & Fry Bins stand fast; i.e., ruggedly, for a long time.

Experience over a period of almost 30 years proves that Neff & Fry Super-Concrete Stave Storage Bins serve from one generation to the next with virtually no upkeep cost. Many of the leading manufacturing, processing, mining, quarrying, distributing, and transportation companies of the country will testify that this is true.

We'll gladly give you the evidence. Get it before you contract for storage bins. Write, wire, or phone us.

NEFF & FRY STORAGE BINS
FOR ALL SORTS OF BULK FLOWABLE MATERIALS

THE NEFF & FRY CO., Camden, Ohio

▲ Mention Item **NED-3989** when writing ▲

Resistors with humidity resistance

In Ward Leonard Resistors, the resistor unit is hermetically sealed inside a vitreous enamel called "VITROHM".

Tough, hard, crazeless "VITROHM" protects the unit under prolonged exposure to the elements, humidity, yes, even thermal shock—and it dissipates heat rapidly.

Write for Resistor Catalog. Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

▲ Mention Item **NED-3990** when writing ▲

MAURATH
arc welding
ELECTRODES

Whatever your requirements may be in welding electrodes, our engineers have already anticipated them. We have all stainless and heat resisting arc welding electrodes stocked; all types coil wire for automatic welding; also electrodes to meet specific analyses. That's why MAURATH ARC WELDING ELECTRODES are in use every day all over the world.

★

WE HAVE COMPLETE FACILITIES IN OUR PLANT FOR COLD DRAWING, ROLLING, PICKLING AND ANNEALING.

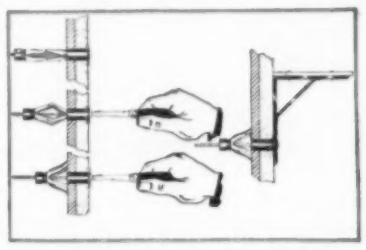
MAURATH, INC.

21800 MILES AVE., CLEVELAND 22, OHIO

▲ Mention Item NED-3991 when writing ▲

SCREW ANCHOR

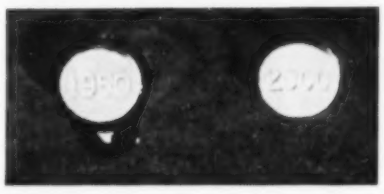
For general construction and industrial use, Molly screw anchor holds securely without defacing wall and forms its own socket which will not disengage or drop down when screw is removed. Spider anchor conforms to any condition and provides secure anchorage for electrical equipment, panels, fans and other devices in any type hollow wall or floor, wood, masonry, pulp board, tile and steel. Removal is easily accomplished, and screw can be replaced in same anchor. Unit is available in diameters from 1/16 through ¼-inch and lengths from 15/16 through 3½-inches. Made by **Molly Corp.**, Court & Church Sts., Reading, Pa.



▲ Mention Item NED-3993 when writing ▲

TEMPERATURE INDICATORS

Now available in temperature range between 1600° and 2000° F, Tempil-stiks and Tempil pellets temperature indicating products can be used to determine heat intensity quickly and accurately. Beginning with 113° F, they can be obtained in 12½-degree temperature increments to 400° F and in 50-degree steps from 400° to 2000° F.

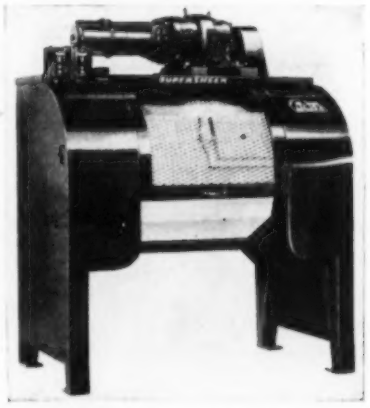


Tempilaq paint form of temperature indicator is available in similar intervals from 113° to 1600° F only. Made by **Tempil Corp.**, Dept. D, 132 W. 22nd St., New York 11, N. Y.

▲ Mention Item NED-3994 when writing ▲

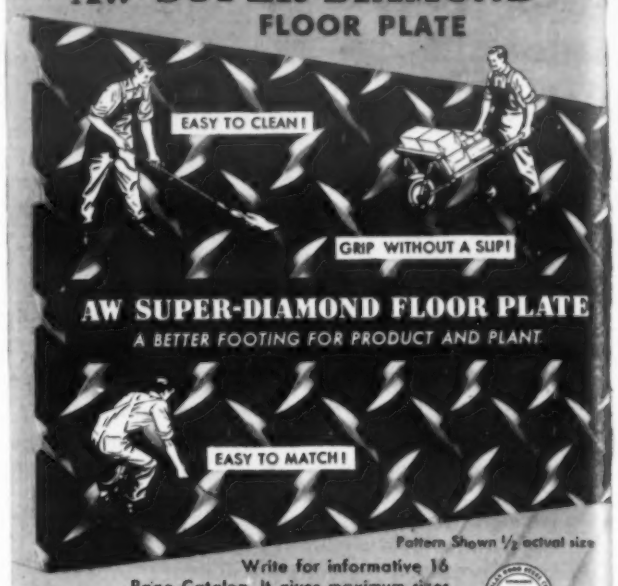
DEBURRING-FINISHING BARREL

Obtainable with neoprene lining or unlined, model DB-200 deburring and finishing barrel has speed which is variable from 6 to 30 revolutions per minute to provide proper rate for specific work. Improved safety is assured with rollaway perforated hood which permits positioning of barrel with hood down. There are no protruding parts or door handles, and barrel is light colored to allow operator better working vision. Ease of operation is achieved with positive magnetic break that allows inching barrel into position, and doors are cam operated for quick opening and closing. Made by Almco Div., **Queen Stove Works, Inc.**, Dept. N1, Albert Lea, Minn.



▲ Mention Item NED-3995 when writing ▲

Foundation For Safety
AW SUPER-DIAMOND FLOOR PLATE



Pattern Shown ½ actual size

Write for informative 16 Page Catalog. It gives maximum sizes and other information.

AW SUPER-DIAMOND FLOOR PLATES THAT GRIP L-35*

A Product of **ALAN WOOD STEEL COMPANY** CONSHOHOCKEN, PA.

▲ Mention Item NED-3997 when writing ▲

More capacity... less space

New FAFNIR Heavy Duty Ball Bearing Pillow Blocks Type LAO

Incorporating Fafnir Wide Inner Ring Ball Bearing with exclusive self-locking collar, plus Mechani-Seals

- *Fafnir Mechani-Seal with additional member . . . felt and rubber washer.*
- *Unrestricted self-alignment.*
- *Compact, one-piece housing. Reinforced at stress points.*
- *Prelubricated with provision for relubrication.*
- *Sizes for 1 3/16" to 2 15/16" shafts.*

Ask your industrial distributor to show you the new line of Fafnir Heavy Duty Pillow Blocks, Type LAO, or write for literature. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR
BALL BEARINGS

Most complete line in America

▲ Mention Item NED-3998 when writing ▲

QUICK
Pipe Reaming
THAT SAVES PIPE

RIDGID
Extra-Long-Taper Reamer won't thin, flare or split pipe

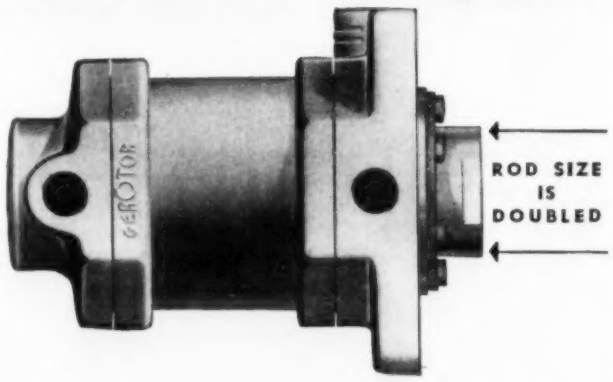
● Secret of the RIDGID's safe easy reaming is its extra-long-taper. With a few light ratcheted turns, you whisk the burr from pipe or conduit without fear of thinning, flaring or splitting. You save time, work *and* pipe. Two sizes: No. 2, ⅛" to 2"; No. 3, ⅜" to 3." No. 2 reamer unit, available without ratchet handle, fits RIDGID No. 00R threader handle. Ask your Supply House.

Reamer unit fits RIDGID No. 00R Ratchet Handle.

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

▲ Mention Item NED-3992 when writing ▲

GEROTOR 2:1 CYLINDERS
Increase Output!



Gerotor 2:1 Hydraulic Cylinders have a piston rod about twice the diameter of a standard rod. This reduces displacement, allowing faster retraction. With cycle time shortened, the cylinder accomplishes more work. Saving is made in motor and pump size. Available in 6 mountings, in 10 bore diameters, in strokes up to 96" and with cushioning.

Write for Catalog Section 103

GEROTOR MAY CORPORATION, Dept. NED 6 Baltimore 3, Md.

WHEN YOU APPLY HYDRAULIC OR AIR POWER, PLAN WITH **GEROTOR**

▲ Mention Item NED-3996 when writing ▲

Those extra hours of SERVICE! ? ?

HANSEN *one-hand* **TACKER**

A bonus of free work each day because your Hansen Tacker gets so much more work done! Drives tacks or staples firmly, accurately—fast as you can grip the handle. Hold the tacker in one hand, your work in the other.

The ideal tool for assembly, crating, tagging, or other fastening jobs. Holds scores of tacks at one loading. One trial will convince you.

ASK FOR FOLDER

A. L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE. CHICAGO 40 ILL.

▲ Mention Item NED-3999 when writing ▲

AO PANORAM Goggles

The AO Panoram Goggle is available as:
No. 600 — Clear Frame, Clear Lenses
No. 601 — Clear Frame, Green Lenses
No. 602 — Green Frame, Clear Lenses
No. 603 — Green Frame, Green Lenses

Workers have a "first row orchestra" view of the work with "Panoram" —
AO's Wide-Vision Safety Goggle!

Worn over prescription glasses or alone, its plastic frame, eyecups and replaceable lenses in either clear or green acetate provide snug, face-conforming protection. Eyecups vented at top and bottom assure ample ventilation, minimize clouding of lenses. Bridge is floating saddle type that fits comfortably. Elastic headband is extra wide, easily adjustable.

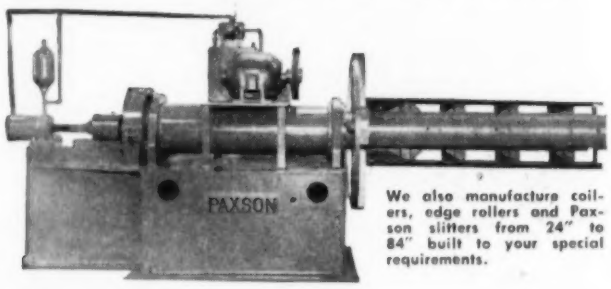
"Panoram" protects against foreign particles attacking from any direction. Recommended for chipping, grinding, babbitting, riveting, rail cutting, spike driving, spot welding, etc. Your nearest AO Safety Products Representative can supply you.

American Optical Company
Safety Products Division
SOUTHBRIDGE MASSACHUSETTS
Branches in Principal Cities

Mention Item **NED-4000** when writing

PAXSON PAY-OFF REEL

60 Inch...Hydraulic Operation



We also manufacture coilers, edge rollers and Paxson slitters from 24" to 84" built to your special requirements.

This pay-off reel can be supplied in any size to accommodate coils from 18" to 60" widths and weights up to 30,000 pounds. For slitter lines, cut-off lines and for large press stock feed. Adjustable tension brake and hydraulic operation of collapsing and expansion mechanism contribute to simplicity of operation. Coil weight is carried on Timken bearings.

Write for complete information on any of this equipment.

PAXSON MACHINE CO.
SALEM, OHIO

Mention Item **NED-4001** when writing

Pyle-O-Flex

- Explosion-Proof
- Watertight
- Flexible

Conduit Fittings

Pyle-O-Flex patented flexible fittings allow a neater installation without the troublesome and costly bending and fitting of rigid conduit. They are ideal for wiring of gasoline pumps, explosion-proof floodlights, motors and other equipment in hazardous locations. Also used for watertight installations of many kinds. Flexibility allows for adjustment of lights if necessary after installation. Flexibility also protects connections against motor vibration.

Pyle-O-Flex Explosion-proof flexible fittings are available in a full range of sizes and standard lengths. Can be used with Pylet explosion-proof elbows and unions.

Consult your Pylet Catalog for complete listings.

SINCE 1897
THE PYLE-NATIONAL COMPANY
1342 North Kestner Avenue • Chicago 51, Illinois

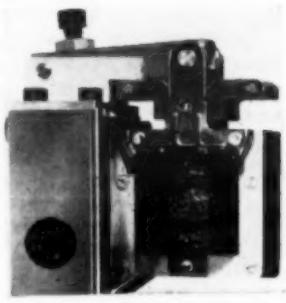
Mention Item **NED-4002** when writing

PLASTIC ROLLER CONVEYOR

Weighing only 32 pounds and having load capacity of 500 pounds per 10-foot section, Alveyor lightweight portable conveyor combines plastic rollers with magnesium or aluminum frames. Conveyor has 10-inch carrying surface with 2-inch diameter rollers set on 4-inch centers, and both rollers and frames are corrosion-resistant. Couplings are hook-on type to permit easy assembly of as many units as required for in-plant operation. Since rollers extend under full width of cartons, this type conveyor is especially useful in handling boxes and cartons which are reusable, such as brewery cases. Made by **Alvey Conveyor Mfg. Co.**, 3200 S. Broadway, St. Louis 18, Mo.

Mention Item **NED-4003** when writing

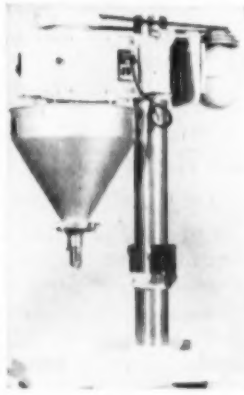
SOLENOID VALVE



Of compact size, two-way high-pressure continuous-duty solenoid valve is intended for hydraulic systems with operating pressures up to 3000 pounds per square inch. It operates on 110-volt 60-cycle current. Poppet type construction eliminates internal leakage and allows full line flow when opened. Impregnated coils which are oil and moisture resistant make this valve suitable for mounting in oil reservoirs. It can be obtained in ⅜-inch pipe size for mounting in any position. Made by **Waterman Engineering Co.**, 721 Custer Ave., Evanston, Ill.

Mention Item **NED-4004** when writing

CONTAINER FILLING MACHINE



Operable manually, automatically or in synchronization with any filling operation, Mateer electric filling machine handles wet, dry, or viscous materials. Based on recycling principle for controlling weight of fill, machine delivers 20 to 70 fills per minute with consistent accuracy. With removable hopper and interchangeable augers and pumps, machine is quickly cleaned and sterilized for changeover to other materials. Rotors and augers operate on shaft, cycling of which is regulated by synchronous counter. Shaft speeds are adjustable from 450 to 900 revolutions per minute. Three pump sizes are available for capacities ranging from 1.2 to 560 cubic inches. Filler is supplied in bench and automatic conveyor models with interchangeable parts. Made by **G. Diehl Mateer & Co.**, P.O. Box 131, Lincoln Highway, Devon, Pa.

Mention Item **NED-4005** when writing

FULL PROTECTION until you want it PEELED . . . THAT'S

COPEEL

. . . the modern plastic coating that gives flexible-film protection to the surface of your product

Why risk expensive rejects of parts damaged during storage, transit or assembly? In all these stages Copeel *protects* your products against marring, scratching, rust, corrosion!

Copeel protects the highly polished metal surfaces of precision parts . . . can also be used over properly cured synthetic baking enamels. Applied by dip or spray method, Copeel quickly hardens to a tough flexible film that peels off easily — like the skin of a banana — when required.

Write for Technical Data Bulletin #T504 for full details regarding the most suitable type of Copeel to protect your products. Better yet — let an M&W Sales Engineer discuss with you the best and most economical way to use Copeel.

PIONEERS IN PROTECTION M&W Co 1876 . . . *where industry goes with finishing problems*
MAAS & WALDSTEIN COMPANY NEWARK 4, NEW JERSEY
Boston 15, Mass. • Chicago 12, Ill. • Los Angeles 24, Calif.
Pacific Coast Division: SMITH-DAVIS CO., 10751 Venice Boulevard, Los Angeles 34
MANUFACTURERS OF INDUSTRIAL FINISHES

Mention Item **NED-4006** when writing

THE NEW HARRINGTON

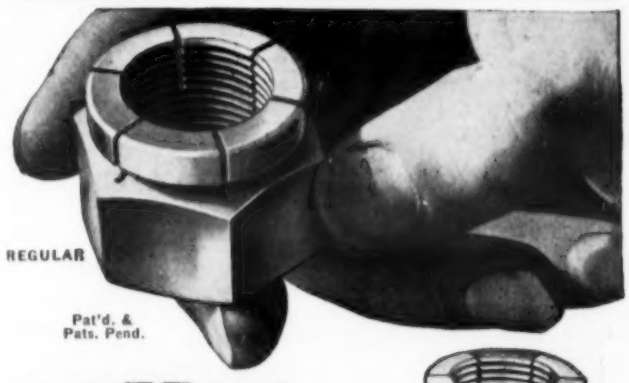
BEARCAT ELECTRIC HOIST

Light in weight, it is easily carried from place to place. Fast, dependable operation . . . high safety factor . . . long, trouble-free service life assures lower material handling costs. Equipped with service cord, it can be plugged into any ordinary electrical outlet. Write for Bulletin 67, it gives complete details about this new Harrington "Bearcat" Electric Hoist.

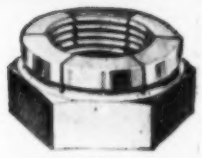
CAPACITIES 170 to 2000 lbs.
SPEEDS 12 to 50 ft. per minute

THE HARRINGTON COMPANY
PHILADELPHIA 30, PENNSYLVANIA
Makers of Hoists since 1876

Mention Item **NED-4007** when writing



FLEXLOC



ONE-PIECE SELF-LOCKING NUTS

WON'T SHAKE LOOSE . . REDUCE MAINTENANCE

Invariably, when nuts loosen, they cause shutdowns, loss of production, and bad tempers all around. All this can readily be eliminated by installing the one-piece, self-locking "FLEXLOC," because *it positively will not shake loose* and positively cuts cost of maintenance.

The all-metal, one-piece resilient "FLEXLOC" is becoming increasingly popular, because it is processed to have an exceptionally uniform torque and, because it packs a stop, lock and plain nut all in one. "FLEXLOC" accommodates itself to a wide range of thread tolerances and can be used over and over again without losing much of its torque. And, being a stop nut, it stays locked in any position on a threaded member. It is not affected by temperatures commonly met.

Available in "thin" and "regular" types—in sizes from No. 6 to 2 in. in diameter—in NC and NF thread series. Write for your copy of the "FLEXLOC" Catalog.

OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNSYLVANIA, BOX 581
CHICAGO • DETROIT • ST. LOUIS • SAN FRANCISCO

Mention Item **NED-4008** when writing

WORK SYNTHANE

on any machine in the shop

Punch it, drill it, turn it, mill it—Synthane is workable on any machine you have. It is readily sawn and sanded, easily edge finished on standard routers or shapers. And Synthane tubing and an automatic screw machine is a combination that's hard to beat for long-run fabrication. (We can fabricate for you if you so desire.)

In addition to its ease of machining, Synthane has many other valuable properties in *combination*, which may make it possible for you to improve your product or process. If you are seeking a hard, dense material that is resistant to corrosion and wear, an excellent electrical insulator, and high in impact fatigue resistance, write today for more information about Synthane laminated plastics. *Mail the handy coupon now.*

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS
SYNTHANE
MOLDED-LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
Northeast River Road, Oaks, Penna.
Please send me a copy of the complete Synthane catalog.
Name _____
Firm _____
Address _____
City _____ *State* _____

Mention Item **NED-4009** when writing

USE
Wirebound
BOXES
and
CRATES

Wirebound Box Manufacturers Association, Room 1828 Borland Building Chicago 3, Illinois

Mention Item NED-4011 when writing

There's "No Ceiling" on VALIMITOR Protection

INFINITE KVA BUS

VALIMITOR Starter • 2300-4600 VOLT MOTOR

EC&M VALIMITOR* STARTERS

1. Are easy to apply—*No calculation of short circuit capability necessary.*
2. Will *not* be out-moded by future growth in KVA—*at plant or central-station source.*
3. Require no spare-units—*no fuses to replace after a fault.*
4. Reduce effect of "short"—*clear back to the power source.*
5. Give *permanent* protection—today and forever.

*Trade-mark (Volt-Ampere-Limitor)

Write for No. 23 ISSUE of the EC&M ACCELERATOR

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

Mention Item NED-4012 when writing

Save Time & Product while Weighing

Actual weight is attained on a regular even balance platform scale when the beam is exactly level or in perfect balance. Under normal working conditions in a produce operation not over two perfect weighings in a hundred occur because few operators ever get a perfect balance due to bad light, slow operation, eye strain, or general fatigue. EXACT WEIGHT Indicators remove these disadvantages by (1) substituting a dial easy to read in even bad light; (2) snubbing the beam so that it does not bounce up and down; (3) relieves eye strain from watching a beam. Actually this simple attachment which can be added to any even balance scale improves your weights and speeds up your operation at tremendous savings in produce and time. Write for details.

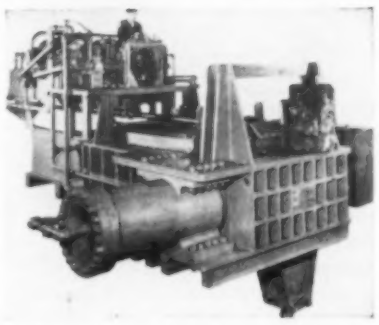
EXACT WEIGHT Indicator — Simplifies act of fast, accurate weighing . . . easy to install . . . furnished with rebalancing attachment for quick rebalancing for portable scales . . . no maintenance . . . trouble-free operation.

INDUSTRIAL PRECISION
Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Ave., Columbus 12, Ohio
783 Yonge St., Toronto 5, Canada

Mention Item NED-4013 when writing

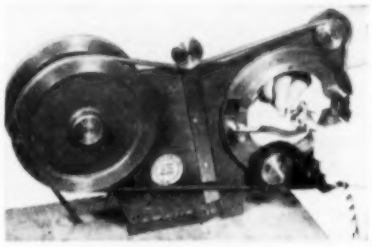
SCRAP-METAL BALING PRESS



Turning out high density bales of 600 to 750 pounds each at rate of 7.5 tons per hour, model 600S-1 type D scrap-metal baling press is powered by two 75-horsepower electric motors. Machine requires floor space 24 feet long and 22 feet wide, is 11 feet high and weighs 116,000 pounds. Hydraulic equipment includes Vickers pumps and control valves and Meehanite hydraulic cylinders. Charging box is 100 x 58 x 35 inches and will deliver finished bale measuring 16 x 18 x 35 inches. Skip pan loader of 4½-cubic yard capacity permits preparation of charge while press is baling. Made by **Dempster Brothers, Inc.,** 49 N. Knox, Knoxville, Tenn.

Mention Item NED-4014 when writing

TAPING MACHINE



Improved by replacing tension blocks with double rollers and using additional roller for feeding device that determines amount of lap, Segur taping machine is designed to wind plastic film tape on wire harnesses and on motor armature coils. Machine centers work at point being wound and carries reel of tape around it to perform winding operation. Closed coil is inserted through slot in wheel assembly and then turned by operator as winding proceeds. Two sizes of machine can be obtained, one holding reel of 36 yards and other reel of 72 yards of tape which can range in width from ⅜ to 1 inch. Operating speed can vary between 200 and 600 revolutions per minute, and machine should be powered by ¼-horsepower electric motor. Made by **Electric Service Mfg. Co.,** 1735 Cambria St., Philadelphia 32, Pa.

Mention Item NED-4015 when writing

SPRAY-ON HEATING ELEMENT

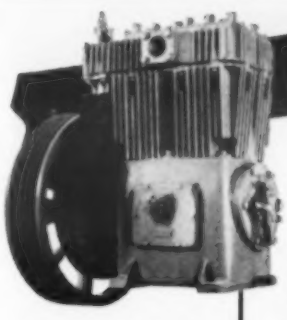
Although intended primarily for de-icing applications on modern high speed aircraft, Electrofilm heating element can be used to solve many industrial heating problems because of ease with which it can be installed on surfaces of any shape or size. Heating element can be distributed evenly over entire area to be heated and is separated from part by thin insulating coating. It has heat transfer efficiency in range of 90 to 95 per cent, and it is applied by spraying to normal film thickness of 0.010-inch which results in weight, less leads, of about 0.05-pound per square foot. Film is highly resistant to solvents and mechanical and thermal shock, is unaffected by exposure to temperatures from −100° to 450° F and can be applied to exterior parts of object as well as interior. Made by **Electrofilm Corp.,** 7116-21U Laurel Canyon Blvd., North Hollywood, Calif.

Mention Item NED-4016 when writing

POURING HEATERS

Usable with Cerro Alloys, Wood's metal and other low melting point bismuth base alloys, line of Cerrobend pouring heaters now includes 3 and 20-gallon capacity units. Electrical heating produces low heat concentration and even heat distribution with selective temperature control ranging from 100 to 300° F which prevents overheating and eliminates need for water jacket. Pouring valve is locally heated to prevent freezing of alloys as they are poured. Constructed with heavy pressed steel inner pot in sheet metal housing, heaters will not contaminate alloys. Sling as well as leg mounting can be supplied. Application fields include aircraft, furniture and other industries bending thin-walled tubing, moldings, and extruded shapes. Made by **Sta-Warm Electric Co.,** 130 N. Chestnut St., Ravenna, O.

Mention Item NED-4017 when writing



NEW! BIG!
Quincy COMPRESSOR
MODEL 390

FEATURES
- POSITIVE PRESSURE LUBRICATION
- TIMKEN MAIN BEARINGS
- PERFECTLY BALANCED CRANKSHAFT
- COPPER-FINNED INTERCOOLER
- LYNITE RODS
- ALUMINUM CYLINDERS AND HEADS

With addition of the Model 390, Quincy offers the most complete line of air compressors ranging in size from 1 to 90 c.f.m. Model 390 is a two-stage, air-cooled unit with a piston displacement of 90 c.f.m. New design features provide *greater over-all* efficiency. Available as a tank mounted unit, base mounted unit or as illustrated. Electric motor or gas engine drive. Quincy builds air compressors *exclusively.* Have a Quincy specialist help you to select the correct type and size compressor to meet your requirements.

WRITE FOR DETAILS AND PRICES
QUINCY COMPRESSOR CO.
Dept. 10, Quincy, Illinois
Branch Offices: New York • Chicago • Philadelphia San Francisco • St. Louis

Mention Item NED-4018 when writing

Turn Dust into PROFITS

. . . at the source of dust

with this Pangborn "CL" unit type Collector

IN areas of heavy dust concentration, install the Pangborn "CL" Unit Dust Collector. It's a small, factory-assembled unit designed for maximum effectiveness *at the dust source.* Has all-metal construction (except filter cloth), motor driven screen shaker. Screens are removable, and collector is available in six sizes from 180 to 820 sq. ft. cloth area.

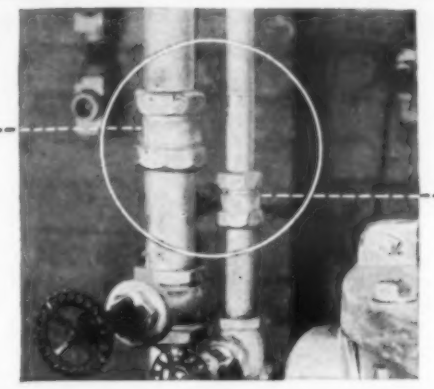
This unit-type dust collector located directly in the "dust pockets" gives you greater flexibility . . . may offer greater savings than a large central collector.

GET ALL THE FACTS!
Write for Bulletin 912 which shows you how a Pangborn "CL" Unit Collector makes a profit out of your dust problems.
Address: PANGBORN CORPORATION, 294 Pangborn Blvd., Hagerstown, Maryland.

Look to Pangborn for the Latest Developments in Dust Control and Blast Cleaning Equipment.

STOP THE DUST HOG from stealing profits with
Pangborn DUST CONTROL

Mention Item NED-4019 when writing



"FLEXIBLE-TIGHT" JOINTS

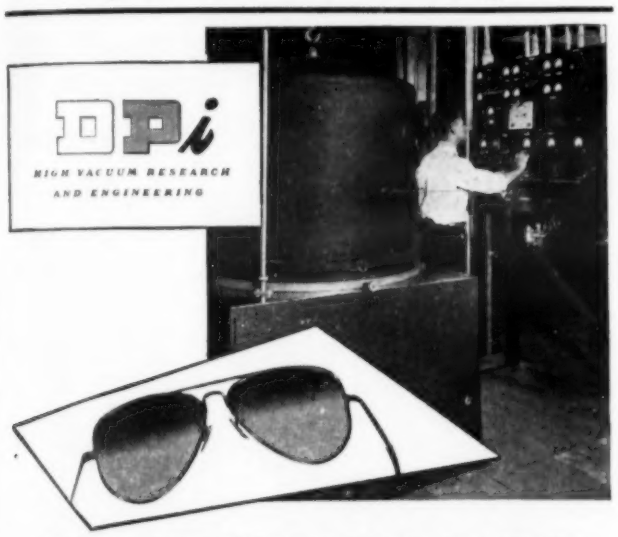
FOR FACTORY PIPING

For piping up to 2" in diameter, Dresser Style 65 "No-Thread" Fittings provide quick, permanent connections. On equipment piping, on gas, oil, water, air lines, these handy joints stay tight despite vibration, expansion and contraction. No pipe threading, no exact pipe aligning. The only tool needed is a wrench. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pennsylvania. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto. Sales Offices: New York, Chicago, Houston, San Francisco.

▲ Mention Item NED-4020 when writing ▲



SUN GLASSES STEEL PLATED UNDER HIGH VACUUM

DPI High Vacuum Coaters are used at Bausch & Lomb to deposit stainless steel in a controlled "gradient" pattern on lenses to provide better scientific glare protection. This is one of many ways DPI high vacuum techniques are serving industry.

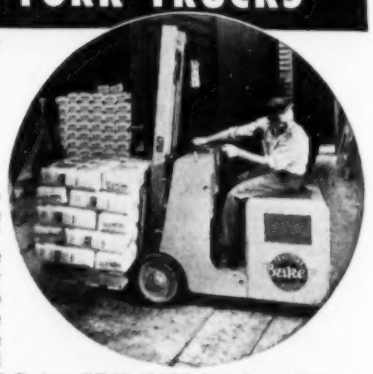
For information on High Vacuum for Distillation, Dehydration, Heat-treating, Coating, etc., write...

Vacuum Equipment Division
Distillation Products, Inc.
763 Ridge Road West, Rochester 13, N. Y.
Distillers of Oil-Soluble Vitamins and Other Concentrates for Science and Industry; Manufacturers of High-Vacuum Equipment.

▲ Mention Item NED-4021 when writing ▲

BAKER *Light-Weight* LOW COST ELECTRIC FORK TRUCKS

—save money on SMALL HANDLING JOBS!



● Here's the ideal cost-saving solution to the countless "in-between" handling problems where loads are too big for manual hauling, too small for the average industrial truck. The Baker FQH (1000 and 1500 lb. capacity) and Baker FRH (2000 lb.) have been specifically designed to meet this need. They load and unload box-cars and trucks, transport parts or materials between production processes, and high tier pallet loads in storage.

Their light weight admits them where floor or elevator loadings are restricted. Their compact small size and maneuverability are readily adaptable to narrow aisles and congested areas. Their extremely low operating and maintenance costs permit savings on a surprisingly small handling volume. Their low "package" price—including battery and charger—places them in the range of the smallest capital investment budget.

Write for descriptive literature.

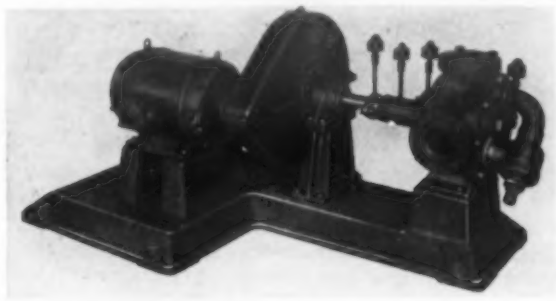
BAKER INDUSTRIAL TRUCK DIVISION
of The Baker-Raulang Company
1245 WEST 80th STREET • CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

▲ Mention Item NED-4022 when writing ▲

TOTALLY ENCLOSED PUMP

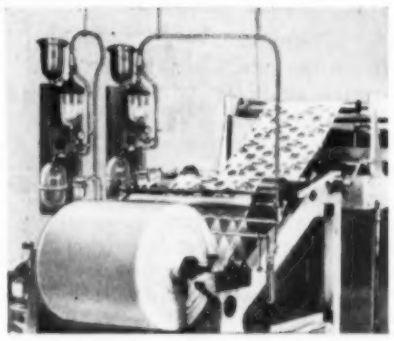
Operating at 375 revolutions per minute, model Q162 totally enclosed pump has capacity of 200 gallons per minute and can be used for fast loading or unloading



of fuel oil, gasoline or diesel fuel. It is of single speed and single capacity type and is intended for outdoor operation without protection of any kind. Features include improved base, motor rails and single gearing built to accommodate NEMA frame motors up to 15 horsepower at 1750 revolutions per minute; oil-tight cast-iron gear case with bullseye sight gage, filler and drain plug; valve on pump head to prevent damage if discharge line is closed; and five extra large ball check grease cups on pump and bearings. Made by **Viking Pump Co.**, Cedar St., Cedar Falls, Iowa.

▲ Mention Item NED-4023 when writing ▲

POWDERED MATERIAL SPRAY



Application of dry powdered materials of all types for manufacturing, processing and dusting operations is function of this Craig Dri-Spray system. Individually separated and aerated dry powder particles are applied at low pressure to assure uniform distribution without flotation. Volume of powder sprayed can be regulated from less than 1 ounce to more than 6 pounds per hour per unit.

Originally intended for use in graphic arts industry for applying powder particles between printed sheets to prevent sticking, picking and offsetting, this equipment is now being employed for many industrial operations. Typical of uses are dusting of molds, calendering, sheeting, spraying powdered resins on coated fabrics, internal dusting of tubing and dusting of sheet or web on one or both sides. Most of these operations are performed during course of normal processing or manufacture.

Individually aerated powder particle separation is produced in spray tank by means of dry air supplied by silica gel dehydrator. Powder is carried to point of application by syphoning or aspiration. Operation is fully automatic and adjustable, and air consumption is approximately 2 cubic feet of air per minute. Spray tubes or nozzles are engineered to suit application. Made by **Payne & Craig Corp.**, 82 Beekman St., New York 7, N. Y.

▲ Mention Item NED-4024 when writing ▲

NEW MEAD INDUSTRIAL AIR POWER CATALOG Ready!

Full of Suggestions for FASTER, CHEAPER PRODUCTION!

Illustrates, describes Air Cylinders, Valves, air operated Presses, Vises, Chucks, Hammers, Drill Press Feeds, Work Feeders, Timers, semi-automatic combinations, etc.

Write for Complete Catalog!

MEAD SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. NA-69, Chicago 41, Ill.

▲ Mention Item NED-4025 when writing ▲

NEW CONDENSER CUTS REFRIGERATION COSTS SAVES COOLING WATER

*PATENTED

● The Niagara Aeropass Condenser cuts the cost of refrigeration by running compressors at lower head pressure, saving up to 35% of power and 95% of the cooling water.

The refrigerant gas passes thru two coils in an air stream. The first, "Duo-Pass"* dry coil, removes the superheat by air cooling and condenses oil vapor. The second, condensing coil, drenched by recirculated water spray, condenses by evaporation, transferring to the air 1,000 BTU for every pound of water evaporated. This done at low temperature, no scale forms on condenser tubes to clog air passage.

Between the two coils is the "Oilout,"* which purges the system of crankcase oil and dirt, keeps it always at full capacity.

The "Balanced Wet Bulb"* control holds head pressure at the practical minimum. It automatically proportions the fresh air stream to the condensing load with the full benefit of power-saving on cool days, providing full capacity for peak loads.

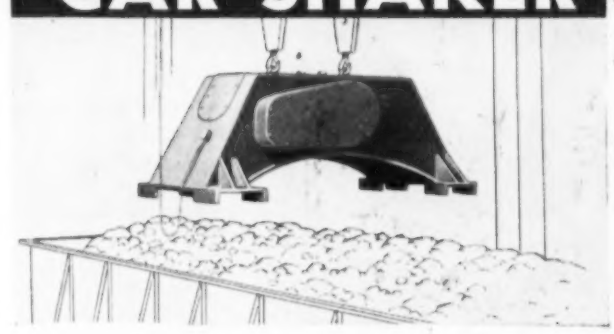
Niagara Aeropass design results from over fifteen years' experience condensing by air. It is completely trustworthy for year 'round operation. Users say, "It saves half the difficulties and labor of running a refrigeration plant."

Units range from 10 to 100 tons capacity.
For full information ask for Bulletin 103.

NIAGARA BLOWER COMPANY
Over 35 Years Service in Industrial Air Engineering
Dept. ED, 405 Lexington Ave. New York 17, N. Y.
District Engineers in Principal Cities

▲ Mention Item NED-4026 when writing ▲

NEW! Allis-Chalmers CAR SHAKER



FOR SAFE, SPEEDY DROP-BOTTOM GONDOLA CAR UNLOADING

THIS NEW Allis-Chalmers car shaker saves time, labor... provides greater safety in emptying coal, cinders, ore, slag, coke, sand, gravel and other granular materials. Motor is inside all-welded steel body with completely enclosed *Texrope* V-belt drive. Body shoes fit all gondola cars. Shaker body is stress relieved...well balanced for ease in handling. Weighs about five tons, measures 11 by 5 by 4 ft. 4 in. high. Bulletin 07B7221. A-2699

Texrope is an Allis-Chalmers trademark

ALLIS-CHALMERS, 918A SO. 70 ST. MILWAUKEE, WIS.

A-C ALLIS-CHALMERS

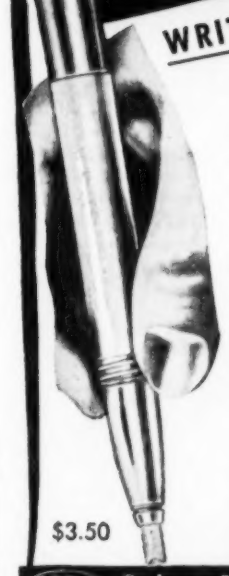
ALLIS-CHALMERS

▲ Mention Item NED-4027 when writing ▲

the handiest marking tool you've ever used!

Flo-master FOUNTNBRUSH and INKS

WRITES ON ANY SURFACE!



No marking job is too tough for the *Flo-master*. Name your surface—cellophane, metal, foil, glass, wood, waxpaper—it writes on anything! Dries instantly. Won't rub off.

Carry the *Flo-master* in your pocket like a fountain pen. Won't leak—thanks to automatic valve control. *Flo-master* instant-drying Ink is available in black and seven brilliant colors. Interchangeable nibs make possible lines from 1/32" to 3/8" wide.

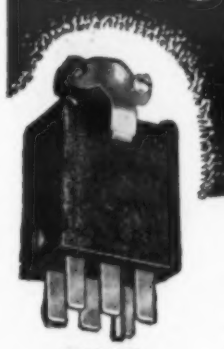
Ask your supplier about Flo-master FOUNTNBRUSH and INK sets today. They contain everything you need to make marking a cinch!

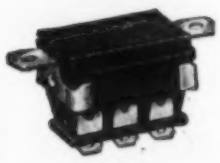
$3.50

CADO *Cushman & Denison Mfg. Co.* 135 West 23rd St., New York 11

▲ Mention Item NED-4028 when writing ▲

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS of proven quality!


P-406-CCT


S-406-AB

Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

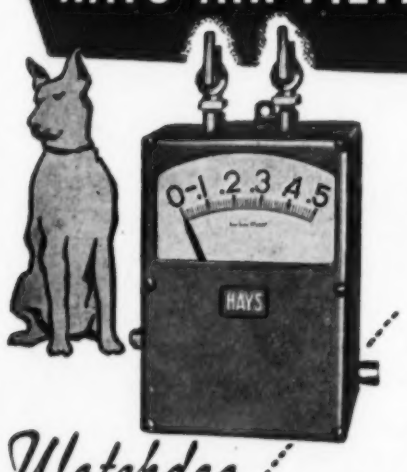
Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel caps with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

Information on complete line, in Jones Catalog 17: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write

HOWARD B. JONES DIVISION
Cinch Mfg. Corp.
2460 W. GEORGE ST. CHICAGO 18, ILL.

▲ Mention Item NED-4031 when writing ▲

HAYS AIR FILTER GAGE



Watchdog over YOUR AIR FILTER

It pays to stand watch over air filters, to guard against possible inefficiency due to excessive dirt collection. Install a Hays Air Filter Gage—It's quick and simple to install . . . indicates air resistance at all times . . . warns when filter element needs cleaning or renewal . . . eliminates guesswork . . . sounds an alarm (if desired) when dirt dams proper air circulation. Full information in Hays Bulletin 46-751. Write for it today!

The HAYS CORPORATION
Since 1901 COMBUSTION & INDUSTRIAL INSTRUMENTS & CONTROL
MICHIGAN CITY, INDIANA, U.S.A.

▲ Mention Item NED-4032 when writing ▲

MAIL COUPON TODAY

Koehring 304 Cruiser Crane, mounted on rubber, goes anywhere . . . is not tied down to tracks . . . increases storage area . . . travels 4.5 m.p.h. . . lifts up to 29,000 lbs. . . is one-man operated. Send for more information and complete facts.

KOEHRING COMPANY, Dept. P, MILWAUKEE 10, WIS.
Please send literature on 304 Cruiser Crane for.....
.....
(Type of plant or work to be handled)
NAME.....TITLE.....
COMPANY.....
ADDRESS.....
CITY & STATE.....
K853

KOEHRING 304 CRUISER CRANE
KOEHRING COMPANY, Milwaukee 10, Wis.

▲ Mention Item NED-4033 when writing ▲

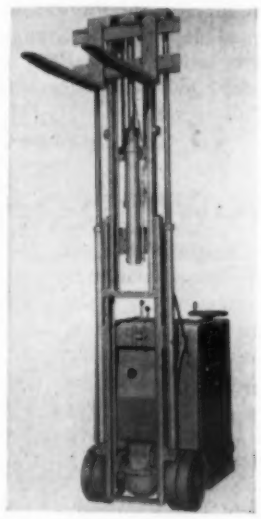
FISH TAPE

Round surface of Coil-Flex fish tape enables it to slide easily through all types of conduit including aluminum. It is extremely flexible and can be pushed or pulled with little effort through all bends permitted by electrical code. Ends are smooth and round to avoid catching and snagging, and they prevent cutting or damaging of aluminum conduit.

Tape consists of 25-foot length of steel spring 11/32-inch in diameter with rustproof inner steel cable. It is tested at 400-pound pull. Threaded male fitting on one end and female fitting on other facilitate joining two or more lengths for jobs requiring long tapes. Made by **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.

▲ Mention Item NED-4034 when writing ▲

ELECTRIC FORK TRUCK



Capable of right-angle stacking from 8-foot aisles with 40 x 32-inch pallet, model JHVH-2H Aisle Saver electric fork truck is especially designed for operation in warehouses and plants with narrow aisles. This 2000-pound capacity truck has free initial lift of 63½ inches and maximum lift of 120 inches and is equipped with 83-inch collapsible mast which incorporates auxiliary twin-cylinder hydraulic lifting unit. Driving unit has double reduction spiral bevel to helical gears of drop-forged alloy steel. Gears are heat treated, ground, polished and lapped for quiet operation. Standard tilt is 5 degrees back and 3 degrees forward. Made by **Crescent Truck Co.**, 1134 Willow St., Lebanon, Pa.

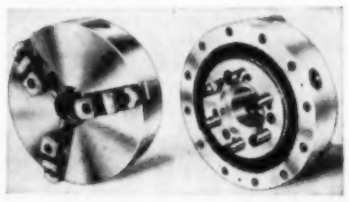
▲ Mention Item NED-4035 when writing ▲

ELECTRIC DRILL

Compact and sturdy, No. 24A ¼-inch electric drill is designed for production work wherever lightweight small-size tool is required. Capable of drilling metal, wood and composition materials, drill can be used at full load for continuous drilling without stalling. Construction features include aluminum alloy die-cast housing, helical gears, oil-impregnated bronze bearings, three-jaw Jacobs chuck, trigger type switch with locking device and rubber covered cord with ground connection. Made by **Stanley Electric Tools**, 104 Elm St., New Britain, Conn.

▲ Mention Item NED-4036 when writing ▲

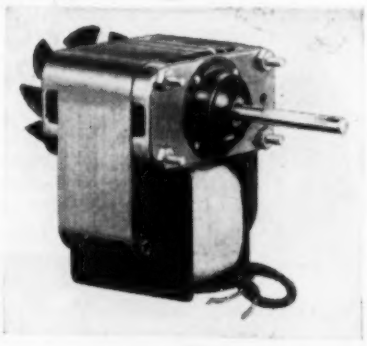
LIGHTWEIGHT CHUCK



Adaptable to all spindle noses and available in all sizes and types up to 15 inches, Whitaloy lightweight chuck facilitates quick starts and stops and eliminates spindle drag. Body of chuck is forged of heat treated aluminum alloy; jaws, scroll and pinions are of heat treated alloy steels; and bore of scroll is machined true with spiral threads. Scroll is chrome plated also to assure continued accuracy and long wearing surface. Made by **Whiton Machine Co.**, 542 Howard St., New London, Conn.

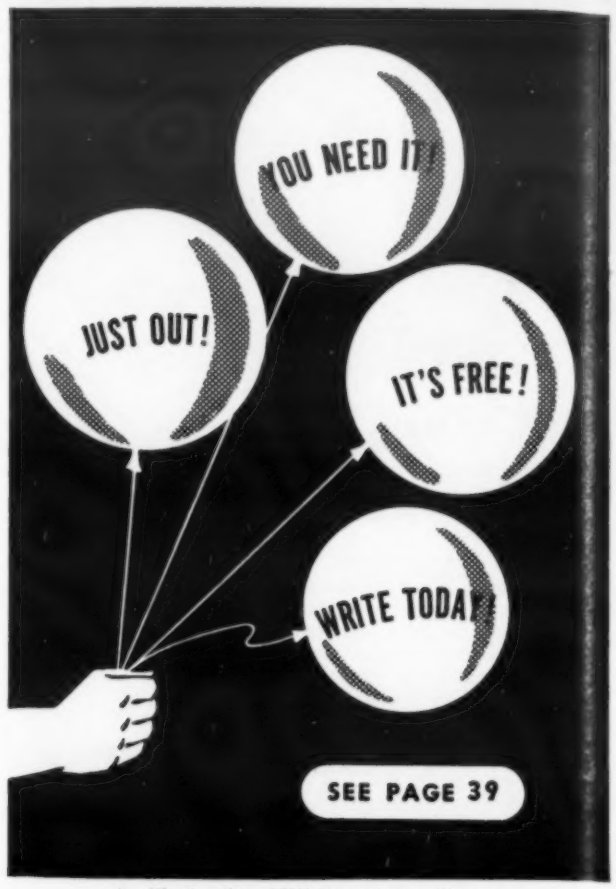
▲ Mention Item NED-4037 when writing ▲

SHADED-POLE MOTORS



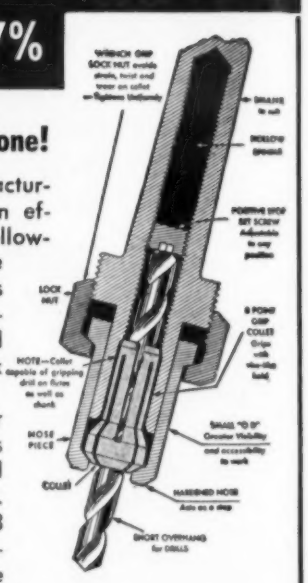
Available in ratings from 1/25 to 1/10-horsepower at 3000 revolutions per minute, type 350 shaded two-pole skeleton motors are based on 3½-inch square frame laminations and have efficiencies up to 35 per cent and starting torques up to 60 per cent of ratings. They can be obtained also with gear reducers. Made by **Russell Electric Co.**, Div., Raytheon Mfg. Co., 360 W. Huron St., Chicago 10, Ill.

▲ Mention Item NED-4038 when writing ▲



▲ Mention Item NED-4039 when writing ▲

DRILL BREAKAGE Reduced 86.7%



Here's How It Was Done!

Large automobile manufacturer, famous for production efficiency, gave us the following report of a test of the Erickson Collet Chuck. As a result of this test, manufacturer has standardized on Erickson Collet Chuck for this operation.

"Erickson chuck is used for drilling 1200 vent holes per day, average drill breakage one per day. We formerly broke from 8 to 10 drills with the ——— chuck. Now have average breakage of 2 drills per 900 oil holes drilled in pistons with ⅛" Erickson Collet Chuck. Had breakage of 15 drills per 900 holes using old drill sleeve method."

ONLY THE ERICKSON PRECISION COLLET CHUCK GIVES YOU THESE FAMOUS FEATURES

1. Delivers accuracy of .0005" TIR
2. Permits collapse of 1/32" (Replacing 7 standard single purpose collets)
3. Grips drills on flutes—permits stubbing
4. Gives such positive grip due to exclusive surface contact

This Cost-Reducing Efficiency Can Be Yours, Too!

Are costs important to you? Do you want the tip-top efficiency that will give you optimum production . . . that will help you weather any competitive storm? If these things are important to you, you certainly will want to get complete data on Erickson holding equipment, showing how Erickson tools applied to your problem can boost production and reduce costs. Write today. Ask for Catalog N-4 or Erickson Consulting Engineer.

GET FULL DETAILS NOW!
ERICKSON TOOLS DIVISION
2302-E Hamilton Ave. Cleveland 14, Ohio

▲ Mention Item NED-4040 when writing ▲

Nicholson Weight-Operated Steam Traps Are

LEAK-PROOFED TO SAVE FUEL

Though 'Cooked' Dry, Won't Leak!

Costly losses of live steam from superheated lines, separators, purifiers, heaters, etc. are being consistently stopped by installations of Nicholson weight-operated traps. Unlike most bucket and float traps, they do not, as illustrated, depend on buoyancy of float. Thus, though "cooked" dry, the valve holds tight. 3 types for all press. to 1500 lbs.

CATALOG 448 gives complete reference data on steam, air, gasoline traps for every industrial application; tables, installation diagrams, and formulae for easy calculation.

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE, PA.

Valves ★ Traps ★ Steam Specialties

▲ Mention Item NED-4041 when writing ▲

NON-SLIP REINFORCED FINGERS·PALM·THUMB CROTCH

Genuine Natural Rubber

INDUSTRIAL GLOVES

Highly desirable for workers who handle wet, slippery objects. Heavy gauge, steam-cured, genuine natural rubber. High age-resistance and exceptional durability. The outstanding value and hand safety specification throughout industry.

*** NO. 5621 FIRM-GRIP STYLE**

LENGTH: 14 inches
GAUGE: .045-.055
COLOR: Brown
SIZES: 10, 11, 12
Also available in smooth finish (No. 5615)

** Request sample and quotations.*

SEIBERLING LATEX PRODUCTS CO.
AKRON, OHIO
200 - 5th Ave. Bldg., New York Merchandise Mart, Chicago

▲ Mention Item NED-4042 when writing ▲

REDUCE FATIGUE and PROMOTE SAFETY WITH AMERIFLEX Hardwood Link MATTING

PREVENT SLIPPING ON OILY OR WET FLOORS

Ideal for use around machinery.
Keeps the feet off of cold, damp floors.
Affords comfort underfoot, retards fatigue, increases efficiency and production.
The openings between the links catch filings and prevent needless cutting of soles of shoes.
Lays flat. Follows the contour of the floor. Light weight.

Substantially constructed of hardened links, firmly woven together on a rust-resisting, galvanized steel spring wire framework. End links are beveled to prevent tripping. Grooves in bottom of the links allow drainage.
Folds into compact roll for easy handling and cleaning.
Natural wood color.
Maximum width in single sections 42-inches, any length.
We also recommend Neo-Cord Oil and Grease Resisting Matting, Tuf-Tred Tire Fabric Matting, American Counter-Tred Safety Matting, Perforated Corrugated Matting, Ezy-Rug Colored Rubber Link Matting, Tile-Top Sponge Matting.
Service by a staff of trained matting experts.
Send us your matting problems.
Write for prices and folder, "A Mat for Every Purpose".

AMERICAN MAT CORPORATION
"America's Largest Matting Specialists"
1733 Adams Street Toledo 2, Ohio

▲ Mention Item NED-4043 when writing ▲

DEHUMIDIFYING UNIT

Particularly useful for special process rooms where it is necessary to maintain extremely low dewpoints, J-150 dehumidification machines are of dual-absorbent type and employ activated alumina as drying agent. Removal capacity is 700 pounds of water per day from air registering 90° F drybulb and 75° F wetbulb. Entirely automatic in operation, machine features adjustable cycle with control on operating panel which insures maximum operating efficiency under any weather or climatic condition both in drying and reactivation process. Weighing approximately 4500 pounds, machine measures 5 x 8½ x 7½ feet. It can be adapted to steam, gas or electricity for providing reactivating heat. Made by **Pittsburgh Lectrodryer Corp.**, Dept. EG, P. O. Box 1766, Pittsburgh 30, Pa.

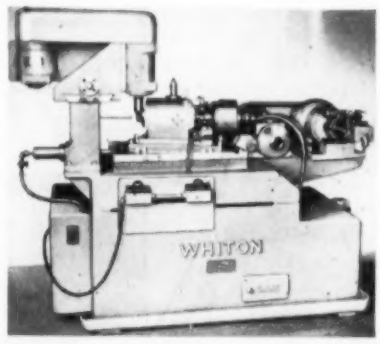
▲ Mention Item NED-4044 when writing ▲

VIBRATION ABSORBING MOUNT

Developed to eliminate vibration on all types of machinery, Westorb vibration absorbing mounts are made from uniformly blended wools. Advantages are elimination of floor bolts to anchor machines, ease of mounting and relocating machines, high operating speeds and minimum noise. Mounts are available in three densities and ½, ¾, and 1-inch thicknesses. Made by **Western Felt Works,** 4115 West Ogden Ave., Chicago, Ill.

▲ Mention Item NED-4045 when writing ▲

MILLING MACHINE



Capable of taking work up to 8 inches in diameter, high production milling machine is primarily designed for cutting bevel gears, spur gears and pinions. It can be used also for other milling operations including any work requiring one or more slots milled on face or outside diameter and work requiring hexagonal, square or several sides to be milled. Machine has vertical spindle mounted in antifriction bearings and individually motor driven through V-belts to allow use of carbide cutters. Spindle is adjustable both horizontally and vertically. Table is actuated by combination of air and cam to impart proper rapid advance to and from cutting position and to produce proper feed for cut. Machine equipment includes coolant tank and coolant pump operated by its own motor. With high speed cutters, cutter speed is 125 surface feet per minute, and feed is 0.003-inch per tooth. Latter can be varied to suit work. Made by **Whiton Machine Co.,** 542 Howard St., New London, Conn.

▲ Mention Item NED-4046 when writing ▲

SAVE MONEY WITH QD-SHEAVES

MORE SIZES STOCKED

Your Worthington distributor lists more "stock sizes" (853) of sheaves and carries more sizes in stock than any other distributor.

By checking your sheave requirements, you can often order a stock size where otherwise you'd have to pay extra for a special.

For ease of installation, absolute tightness on the shaft and *more stock sizes,* order Worthington QD sheaves, the original tapered cone-grip sheaves, easy to get on, easy to get off, yet always tight on the shaft. Worthington Pump and Machinery Corporation, Multi-V-Drive Sales Division, Buffalo, N. Y. General offices: Harrison, N. J. Dept. MVH94

WORTHINGTON

24MV.9.4

▲ Mention Item NED-4047 when writing ▲

Lovejoy wide V-BELT PULLEY MEANS RIGHT SPEED FOR EACH JOB!

In this installation Lovejoy Pulley permits infinitely variable control of work-speed between 15 and 54 cycles per minute.

Lovejoy "Select-O-Speed" for wide driven speed ranges, up to 10:1 ratio. Fractional to 1 h.p.

Easily installed with new, or old machines.

Lovejoy Variable Speed Pulleys, sizes fractional to 8 h.p. Fingertip control change speed to slow or fast while running. Ratios to 3:1. Time-saving!

DELIVERIES FROM STOCK

Send for complete catalog. Illustrates scores of uses. Full data. Also Wide V-Belts and sheaves, and adjustable motor bases. Wire—write

LOVEJOY FLEXIBLE COUPLING CO.

Also Lovejoy L-R Flexible Couplings and Dix Universal Joints

5003 W. Lake St., Chicago 44, Ill.

▲ Mention Item NED-4048 when writing ▲

Removing filings, sawdust and small scrap

AROUND MACHINES... IN THE PLANT..

Modern General Electric Heavy-Duty Cleaners quickly prove their value

Wide nozzles speed floor cleaning

From front office to boiler room, General Electric Heavy-Duty Vacuum Cleaners are doing unusual jobs as well as the usual cleaning jobs with new speed, new efficiency, new economy.

Let these powerful cleaners do these and other cleaning jobs for you:

- wet and dry pick-ups from floors
- cleaning large floor areas (12-in. and 18-in. nozzles save time)
- dusting polished surfaces without scratching
- vacuuming hazardous dirt and dust from high-up areas
- pick-up of heavy dirt and small pieces of metal scrap for salvage.

The speed and capacity of modern General Electric cleaning equipment will surprise you. It will enable your maintenance department to do more and better work. Send coupon for specification literature. A survey, made without cost or obligation, will tell you just what equipment you need.

SEND TODAY!
Learn all about G-E Heavy-duty Cleaners

Industrial Cleaners

GENERAL ELECTRIC

GENERAL ELECTRIC CO., Dept. 22-2613
1285 Boston Ave., Bridgeport 2, Conn.

Our most serious cleaning problem is.....

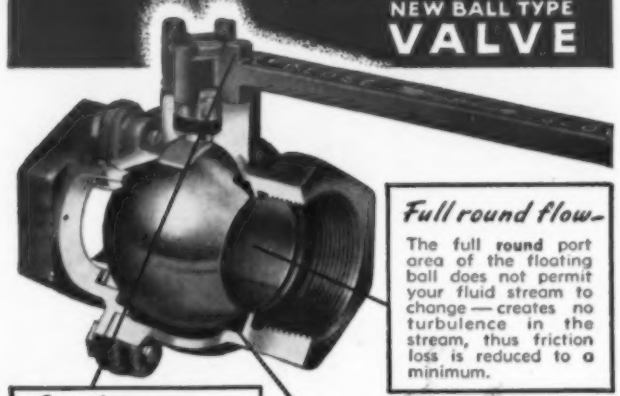
.....

Without obligation, please send the story of your new equipment.

NAME.....
FIRM.....
ADDRESS.....
CITY..... STATE.....

▲ Mention Item NED-4049 when writing ▲

Packed with Performance!
ROCKWOOD'S NEW BALL TYPE VALVE



Full round flow—
The full **round** port area of the floating ball does not permit your fluid stream to change — creates no turbulence in the stream, thus friction loss is reduced to a minimum.

Quick opening and closing—
A quarter turn (90°) of the control handle will give **fast,** full opening to full closing. Handle can be mounted in four different positions assuring clearance in all types of installations. It can also be removed and a "T" handle used wherever remote operation is necessary.

Leak proof Service
Hard chromium plated floating ball in combination with synthetic rubber seat forms a **tight seal.** Pressure of fluid stream will **automatically** position ball against seat — stops leakage. The chromium plated ball will resist pitting, scratching and abrasion.

300 P.S.I. WORKING PRESSURE.

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

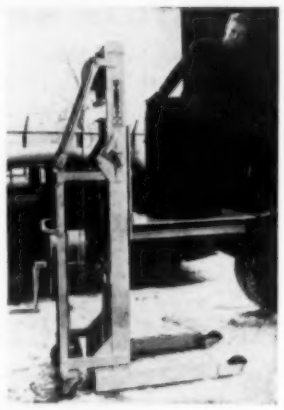
Mention Item NED-4050 when writing

REFUELING PUMP

Intended for pumping from drums and tanks to tractors, trucks or cars, redesigned refueling pump employs nylon cord neoprene-coated diaphragm which is strong and capable of withstanding all types of gasoline and motor oils. Pump is high-suction self-priming type with automatic drainback to permit draining hose and pump back into tank. It will pump approximately 7 gallons per minute. Each pump is fitted with adjustable suction pipe and 8-foot hose which is provided with static wire to lessen fire hazard. Lower casting of pump is threaded for 1½ and 2-inch pipe. Price is $10.45. Made by **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

Mention Item NED-4052 when writing

PORTABLE ELEVATORS



Available in capacities of 500, 1000 and 2000 pounds, three standard Hundred line models of portable elevators are of all-welded steel construction, employ cut spur gear reduction and utilize caster steer and floor lock. They are intended for safe fast loading and stacking as well as for die handling, servicing balconies, overhead repairs and motor truck loading. Made by **Barrett-Cravens Co.,** 4609 S. Western Blvd., Chicago 9, Ill.

Mention Item NED-4053 when writing

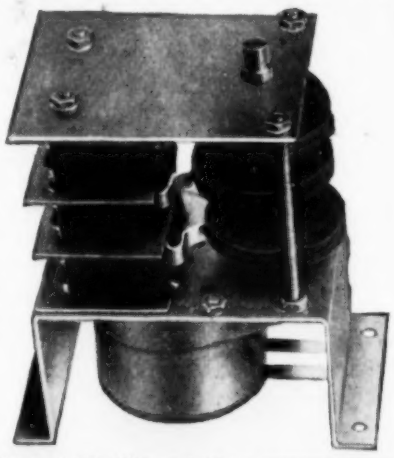
IMPACT WRENCH

Designed to handle from 1¼ up to 2-inch studs, bolts, nuts and cap screws, size 577 impact wrench helps to get heavy equipment back into service quickly by reducing time required for repairs. Wrench operates on rotary impact principle by which motor torque is converted into 1000 rotary impact blows per minute. Tool operates on 90 pounds per square inch air pressure, weighs 72 pounds and has free speed of 535 to 565 revolutions per minute. Hose connection pipe tap is ¾-inch, and 1-inch hose is recommended for maximum performance. Various accessories can be obtained on special order. Made by **Ingersoll-Rand Co.,** 11 Broadway, New York 4, N. Y.

Mention Item NED-4054 when writing

CYCLE TIMER

Designed for built-in application, type CF3 single or multiple-contact cycle timer is used to regulate series of operations in equipment such as dishwashers and battery chargers and to operate motors, valves and signals. It will control automatically a one, two, three or four-circuit operation in predetermined timing sequence by means of cams.



Unit consists of synchronous motor mounted on bracket. Single or multiple cams on shaft actuate enclosed dustproof snap-action switch. Wide range of motor speeds and 27 different time ranges from 1 revolution in 10 seconds to 1 revolution in 24 hours permit unit to be used on almost any required cycle arrangement. Timer can be supplied with knob which permits manual starting, and it will complete one cycle and then stop. Made by **R. W. Cramer Co.,** Middlesex Ave., Centerbrook, Conn.

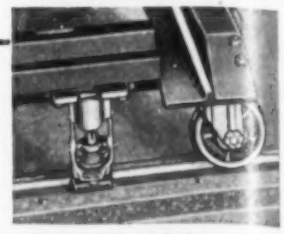
Mention Item NED-4055 when writing

Portable equipment anchored...
RELEASED AT TOUCH OF TOE!

Position Lock applied to portable stand

With a Bassick Position Lock, you can roll movable equipment to the work site . . . *anchor* it firmly in place . . . and roll it away when the job's done, *all at the pressure of your toe!*

Photos show typical industrial applications. Your portable equipment: work stands . . . conveyors . . . portable machines . . . trucks . . . miscellaneous handling equipment . . . almost anything that must move from place to place . . . can be given greater usefulness with Bassick Position Locks. Write for information: THE BASSICK COMPANY, Bridgeport 2, Conn., DIVISION OF STEWART-WARNER CORPORATION. *In Canada:* BASSICK DIVISION, Stewart-Warner-Alemite Corporation, Ltd., Belleville, Ontario.



Position Lock applied to angle floor track and grooved wheel casters on production line

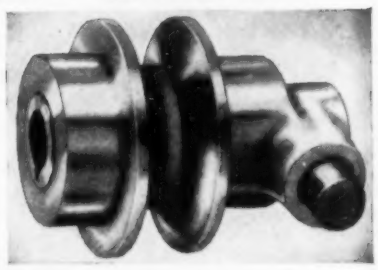
Position Lock on portable production fixtures

Bassick MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

Mention Item NED-4056 when writing

INTRODUCING
NEW CONGRESS
V-Belt Clutch

IMMEDIATE DELIVERY
2½" "A" O.D. ½", ⅝", ¾", Bores
•
2½" "B" and 3", 3½" & 4" Sizes for "A" & "B" Belt to follow



POSITIVE ACTION:
The Congress clutch is positive, easy on the machine, absorbs shocks, trouble free, does not wear out the belt; simple as a light switch to operate—and priced low enough to be used on power lawn mowers, garden tractors, in home work shops and thousands of other applications.

Recommended for use on all gasoline engines and especially ideal for use with electric motors where it is desirable to start under no-load.

Write For Specifications and Prices

CONGRESS DIAMOND BORED DRIVES
3750 E. OUTER DRIVE, DETROIT 34, MICH.

Mention Item NED-4057 when writing

BLOWERS and EXHAUSTERS for air or gas...

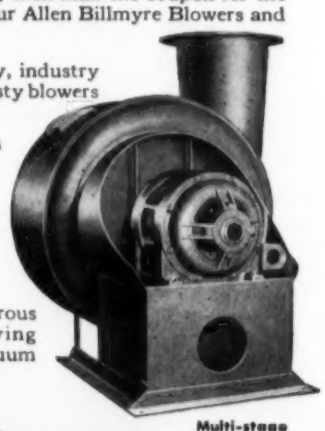
Centrifugal Type
Single and Multi-stage
½ lb. to 7 lbs. pressure
½ h.p. to 250 h.p.

If you have a problem in handling air or gases of various densities, temperatures or chemical compositions, then mail the coupon for the new bulletin describing our Allen Billmyre Blowers and Exhausters.

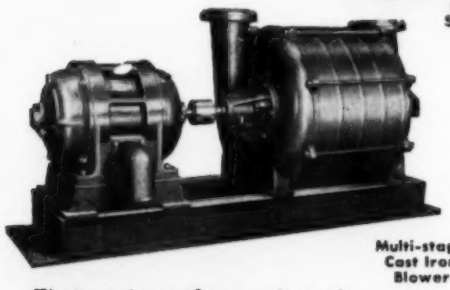
For over a half century, industry has depended on these trusty blowers and exhausters for:

Agitation and Aeration
Combustion
Cooling and Ventilating
Gas and Acid manufacturing

Conveying and numerous other applications having various pressure and vacuum requirements.



Multi-stage Steel blower



Multi-stage Cast Iron Blower

The experience of our engineers is at your disposal. We urge you to call upon us whenever you have an air handling problem.

SEND COUPON for this folder TODAY

Allen Billmyre Division
Lamson Corporation
503 Lamson Street, Syracuse 1, N. Y.

Send me, without obligation, your Blower and Exhauster bulletin B-5

Name.....
Company.....
Address.....

Mention Item NED-4051 when writing

Do YOU Have a NOISE Problem?

This portable, self-contained, lightweight and highly accurate noise meter can be operated by anyone with a few minutes instruction. With it you can find not only WHERE the noise is coming from, but exactly HOW MUCH of it there is. Any sound . . . from a whisper in a padded cell to the blast of a locomotive whistle . . . can be measured accurately, easily and quickly.

If you have any noise problem, the General Radio Type 759-B Sound-Level Meter probably can help you. It is priced at $320.00. Complete information will be sent immediately; possibly it may be the means of considerable savings to you.

Write for "THE NOISE PRIMER" for complete data

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

Mention Item NED-4058 when writing

YOU CAN BE SURE.. IF IT'S
Westinghouse

New Westinghouse Armorline Industrial Luminaires give added fixture performance and quality with precision-engineered Westinghouse Ballasts. These ballasts are your assurance that lamps will deliver their *full rated life*—their *full light output*—with voltage and current *matched to the requirements.*

See a Westinghouse Sales-Engineer today. Send for Booklet B-4005-A, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-04267

Westinghouse
INDUSTRIAL FIXTURES

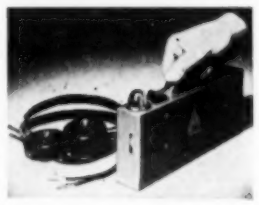
Mention Item NED-4059 when writing

STRAIGHTENING PRESS

To simplify straightening of iron castings prior to machining, 50HE Elec-Draulic press is equipped with special straightening dies in which distorted castings are placed immediately after their removal from normalizing furnace. Press has production capacity of 400 castings per day, averaging 1.6 minutes per casting. Quick-acting release valve lends speed to straightening procedure. Other features include adjustable safety valve to protect against overload, variable-speed ram, movable workhead, eye-level height pressure gage, adjustable table and auxiliary screw-type ram. Two auxiliary return springs assure rapid return of upper half of die. Made by **Dake Engine Co.,** Grand Haven, Mich.

Mention Item NED-4061 when writing

RADIATION DETECTOR



Capable of detecting beta, gamma and x-radiation, small portable RCL Atomic Blinker can be used for radioactive contamination surveys, prospecting for radioactive minerals and similar applications. Instrument contains Geiger-Mueller counter tube and operates on 300 volts from batteries contained within instrument. Radioactivity can be detected by use of ear phones or by watching blinking of light on top of instrument. Made by **Radiation Counter Laboratories, Inc.,** Dept. NED, 1844 West 21st St., Chicago 8, Ill.

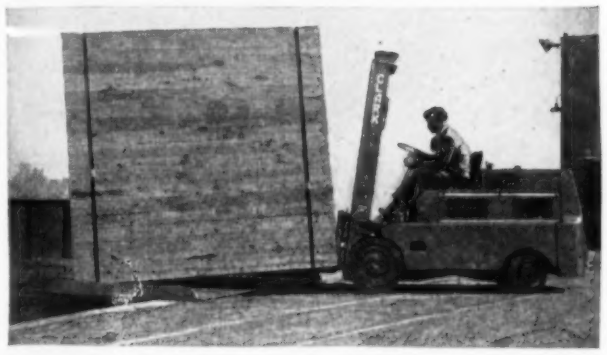
Mention Item NED-4062 when writing

PAPER DRILLER

Available in both bench and floor models, paper driller can be powered by either 110 or 220-volt electric motor. Floor model incorporates welded steel pedestal which can be used for other equipment as well. It is finished in gray and chrome to match driller, measures 16 x 18 x 32 inches, has convenient tool drawer and is equipped with four clamps for easy mounting of driller. Drill table which is 22 x 24 inches is located 35 inches from floor. Made by **Pioneer-Toledo Corp.,** 1212 Jackson St., Toledo 2, O.

Mention Item NED-4063 when writing

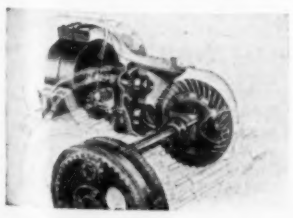
MATERIAL HANDLING *News*



This Fork Truck
DOES MORE WORK
FOR LESS "PAY" *because it has*
DYNATORK *Drive*

Dynatork Drive on a Clark gas-powered fork-lift truck transmits driving force from the engine to the drive wheels by means of magnetic flux. *There is no clutch nor conventional transmission.* Direction of travel is controlled by a finger-tip lever-switch on the steering column.

More work at less cost is the chief benefit to Dynatork users. Useful daily mileage reaches a maximum. Shockless power-flow protects loads. Driver fatigue is minimized. Tires last longer, maintenance costs shrink.



It's vitally important to get the Dynatork story—write for it; and CONSULT CLARK.

CLARK ELECTRIC AND GAS POWERED FORK TRUCKS AND INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIV., CLARK EQUIPMENT COMPANY BATTLE CREEK 21, MICH.
REPRESENTATIVES IN PRINCIPAL CITIES THROUGHOUT THE WORLD
AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

Mention Item NED-4060 when writing

Don't BURN Paper CONVERT IT!

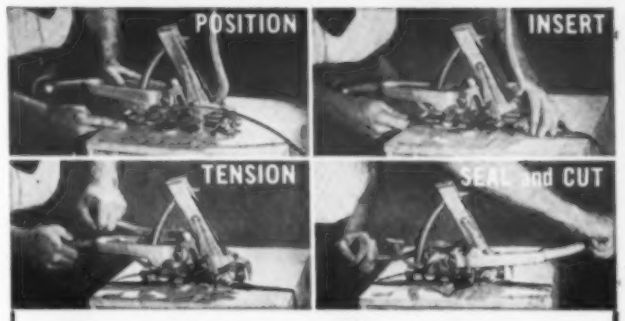
AIRFLUFF PAPER SHREDDER MAKES EXCELSIOR OUT OF CONFIDENTIAL PAPERS, BLUEPRINTS OR ANY WASTE PAPER

Here's the machine that destroys paper yet saves it! The AIRFLUFF Paper Excelsior Shredder, easily shreds, separates and fluffs old newspapers, confidential papers, blueprints, magazines, waste paper, corrugated cartons, tissue, Cellophane and waxed paper. Low price, simple to install. Power and maintenance cost less than 2c per 100-pound bale. Absolutely safe—present employees can easily operate. Cuts in widths from 1/8" to 3/8". Model No. 14 shreds 600 to 1800 lbs. per hour. Model No. 10 shreds 200 to 800 lbs. per hour. Write today for prices and complete facts about these remarkably simple, sturdy and efficient new AIR-FLUFF Paper Shredders.

See our insert and listing in Thomas Register.

MITTS & MERRILL • SAGINAW, MICH.
1000 SOUTH WATER STREET
BUILDERS OF MACHINERY SINCE 1854

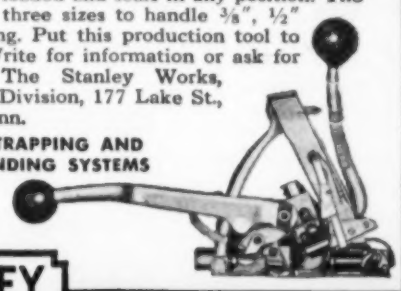
Mention Item NED-4064 when writing



4 STEPS . . . 5 SECONDS
with the Improved
STANLEY ACE STRAPPING TOOL

● Puts strapping on a production basis! Even a beginner can make time with it. Magazine holds 75—100 seals — is easily loaded and seals in any position. The "Ace" comes in three sizes to handle 3/8", 1/2" and 5/8" strapping. Put this production tool to work for you. Write for information or ask for demonstration. The Stanley Works, Steel Strapping Division, 177 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS



STANLEY
Reg. U.S. Pat. Off.
HARDWARE · HAND TOOLS
ELECTRIC TOOLS

Mention Item NED-4065 when writing

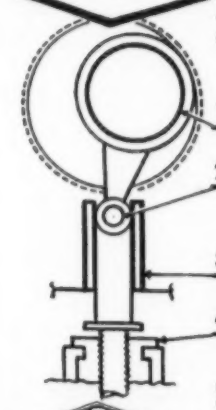
AMPCO Metal can really take it!

Exceptional strength . . . high fatigue limits . . . wear resistance and resistance to impact—
just the material for your tough jobs!

in the punch* and in the press

Possibly you don't make or use heavy presses. But probably you *do* have jobs for Ampco Metal — tough jobs where you need the same superior performance that Ampco Metal gives in these press applications.

*Ampco Grade 24 outlasts the best steel 10 to 1 in the extrusion punch itself.



1 Ampco Grade 12 Bushings, centrifugally cast, provide a wear-resistant eccentric bearing lining that gives maximum heavy-duty service.

2 Ampco Grades 18, 18-23, or 20 centrifugally cast bushings withstand extremely heavy loads without mushrooming. (Ampco field engineers will be glad to recommend proper grade to be used.)

3 Ampco 8 Sheet used as liners (gibs) give maximum life with minimum wear under varying conditions of load, speed, etc.

4 Ampcoloy E-123 (centrifugally cast) affords up and down adjustment of shutting height without galling and with minimum wear.

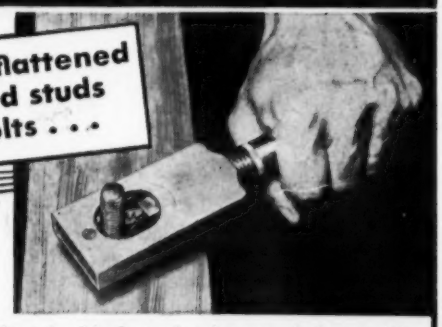
See your nearby Ampco engineer for recommendations on *your* specific needs. Write for our FREE literature giving complete information.

AMPCO METAL, INC. G-2B
DEPT. NE-6, MILWAUKEE 4, WISCONSIN
West of the Rockies, it's the Ampco Burbank Plant, Burbank, Calif.

Mention Item NED-4066 when writing

BUCKINGHAM THREAD CLEANER

Restores flattened or rusted studs and bolts . . .



Now —remove rust and recondition damaged threads this fast, simple way. A few quick twists of the Buckingham Thread Cleaner and presto!—the threads are slick and clean. Flats are smoothed-out . . . Nuts spin on and off in a jiffy.

Buckingham Thread Cleaners follow the pitch of any right- or left-hand thread with a root diameter from 1/4" to 2 9/16". Simply slip the tool over the mutilated stud or bolt, tighten the adjustable cutting jaws and twist. Once adjusted, the setting is maintained by the lock nut on the knurled handle.

Buckingham Thread Cleaners are available in two sizes:

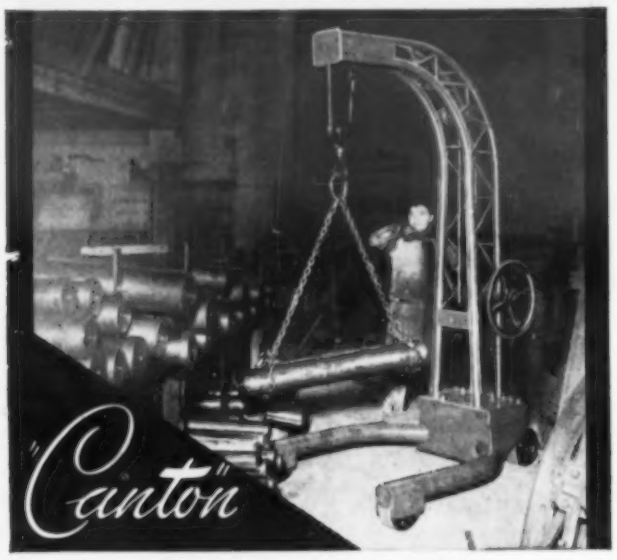
No. 6103. 1/4" to 1" root diam.; Weight, 15 oz.; Price, $6.50

No. 6104. 1" to 2 9/16" root diam.; Weight, 2 lbs.; Price, $13.00

Sold by over 800 authorized dealers. See the Buckingham Thread Cleaner at the dealer nearest you, or write today for additional information on this versatile, time-saving tool.

BUCKINGHAM MANUFACTURING CO., INC.
5-7 Travis Street Binghamton, N. Y.

Mention Item NED-4067 when writing



PORTABLE FLOOR CRANE

One man operation. Holds the load at any point. Two speed lifting mechanism. Positive safety features. Welded tubular steel construction. Made in 8 sizes. 1 to 3 ton capacity.

The HILL ACME Company
"CANTON" DIVISION 6404 Breakwater Ave CLEVELAND 2, OHIO

▲ Mention Item NED-4068 when writing ▲

The Yarway Seatless Blow-Off Valves eliminate the commonest source of trouble and expense with ordinary blow-off valve operations.

The famous seatless principle first introduced nearly 40 years ago, has been constantly improved and adapted to meet modern service requirements.

There is a Yarway Blow-Off Valve for every pressure.

SEND FOR FREE BLOW-OFF VALVE BOOKLET. PLEASE STATE YOUR BOILER PRESSURES.

Cross section of Type "B" Seatless Angle Valve, Flanged.

YARNALL-WARING COMPANY
131 Mermaid Ave., Phila. 18, Pa.

YARWAY BLOW-OFF VALVES

▲ Mention Item NED-4069 when writing ▲

Erase faster and cleaner

with a

Bruning Electric Erasing Machine

The Bruning Electric Erasing Machine brings new efficiency to your drafting room, art, statistical, stenographic, and accounting deparments. Quickly erases pencil, ink, typewriter, carbon, dirt smudges and other marks. **Vibrationless:** easy to use; light-weight motor is mounted in rubber, is extra quiet. **Cool-running:** unlike most machines, the Bruning operates continuously over long periods without heating up. **Long erasers:** Bruning's 7-inch eraser (soft, medium, or hard rubber) is vastly superior to all short-length erasers of other machines, which must be constantly replaced. **Precision built:** ball bearing, permanently lubricated. Long life. Plug into any standard 110 volt AC outlet.

Send today for free literature giving details on this versatile machine.

Charles Bruning Company, Inc.
4730-42 Montrose Avenue, Chicago 41, Illinois

▲ Mention Item NED-4070 when writing ▲

PLUG-IN DUCTS

Loads can be relocated or added in minimum time by using plug-in ducts for power distribution in many plants where branch circuit take-offs occur frequently. Protected branch circuits can be plugged in at 1-foot intervals along entire duct run, and each plug-in opening incorporates built-in steel cover to exclude dirt and dust when branch circuit units are not inserted.

Units are easily attached by rocking them into position on bus bars, and powerful bus contact jaws reinforced with high pressure springs insure positive pressure at all times to minimize temperature rise. Flexible copper couplings used to join bus bars absorb expansion or contraction caused by temperature variations and minimize alignment difficulties between sections. Ducts can be obtained for service up to 600 volts in 225, 400, 600, 800 and 1000-ampere ratings. They are built for two and three-wire single or three-phase and four-wire service. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ Mention Item NED-4071 when writing ▲

WELDING NUTS & SCREWS

Easily attached to sheet steel surfaces by means of projection welding, Spotweld nuts and screws facilitate production of domestic, office and industrial appliances. Fasteners can be applied to products at points where no particular stress or load is placed on welded joint. Seven sizes of low carbon steel nuts ranging from No. 8-32 up to 5/16-18 threaded hole are carried in stock. Sixty-three production sizes of low carbon steel, high brass or stainless steel screws can be supplied promptly. Made by **Ohio Nut & Bolt Co.**, 608 Front St., Berea, O.

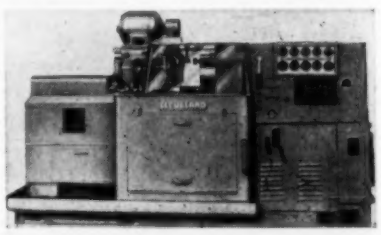
▲ Mention Item NED-4072 when writing ▲

CARBIDE TOOL GRINDER

Designed for free-hand grinding of tungsten carbide tipped and other hard metal tools requiring keen accurate cutting edges, Willey's model 60 carbide tool grinder will handle rough, semifinish and finish grinding. It is equipped for wet and dry grinding and is designed to use 8-inch vitrified wheel for rough and semifinish grinding and a 6-inch diamond or vitrified wheel for finishing. Coolant is force fed by a 1/10-horsepower motor-driven pump mounted inside of pedestal. Machine is driven by a ¾-horsepower motor with drum type reversing switch control. Tool rest table measuring 8 x 18 inches is of semi-steel, accurately machined and with angular adjustment from 15 degrees above to 30 degrees below horizontal position. Made by **Willey's Carbide Tool Co.**, 1346 W. Vernor Highway, Detroit 1, Mich.

▲ Mention Item NED-4073 when writing ▲

AUTOMATIC SCREW MACHINE



Included among several refinements to basic design of Dialmatic model AB 2½-inch single spindle automatic screw machine are redesign of main guarding to permit easy access to tooling and to facilitate chip removal, quick-lowering front panel which forms chute that enables chips to be raked out directly into container, and extensive use of Plexiglas in front and rear panels to increase visibility in tooling area.

Electric feed drive permits independent and infinitely variable forward and return tool feeds without cam changes for each of five tool positions in tool turret. Quick-disconnect plugs are used to link all electric connections leading to and from motor generator set to simplify removal of units for inspection or maintenance. Electric control panel provides signal lights which aid operator in running machine. Change gear cover has been modified so that it can be removed quickly by unscrewing four knobs. Made by **Cleveland Automatic Machine Co.**, 4932 Beech St., Cincinnati 12, O.

▲ Mention Item NED-4074 when writing ▲

MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

▲ Mention Item NED-4075 when writing ▲

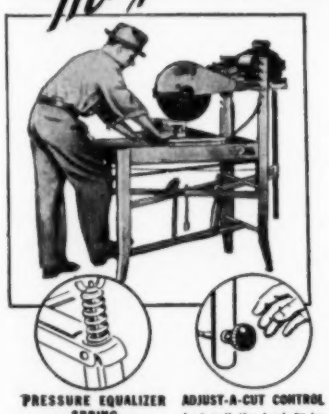
Get ACCURATE Control of Floating Voltage with POWER EQUIPMENT Battery Chargers

You can increase battery life, reduce maintenance and supervisory costs with simple, compact Power Equipment Battery Chargers. They give you accurate control of floating voltage . . . within ±1% . . . entirely eliminating the life-absorbing effects of over- or under-charging. And they're fully automatic in operation . . . electronically or magnetically controlled and regulated . . . designed to provide dependable, efficient, trouble-free charging at lowest possible cost. Write for full details.

POWER EQUIPMENT Company
Specialists in Controlled Rectifiers Since 1935
55 ANTOINETTE ST. DETROIT 2, MICHIGAN

▲ Mention Item NED-4076 when writing ▲

YOU CAN CUT MASONRY MATERIALS LIKE "Magic"...WITH CLIPPER MASONRY SAWS



PRESSURE EQUALIZER SPRING
That smooth, sensitive cutting action on every Clipper is a result of this exclusive Clipper Feature.

ADJUST-A-CUT CONTROL
Just pull the knob to instantly raise or lower the cutting head for materials of varying sizes.

Yes, you can slice through any masonry material in a matter of seconds. Nine new 1949 Clipper Models are available to answer any masonry cutting problem encountered. Intricate cuts are made smooth and easy, because the 1949 Clippers combine the exclusive Pressure Equalizer Spring and Multiple Cutting action with the new "Adjust-A-Cut" control; "Streamlined" Ball Bearing Conveyor Cart; and the "Snap-on" Blade Cover to make possible the fastest masonry cutting job ever performed.

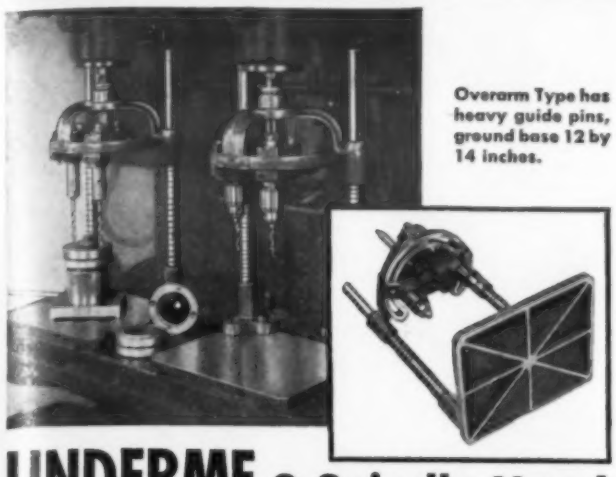
DUSTLESS CUTTING WITH CLIPPER
When job requirements call for cutting both wet and dry, see the real 100% answer to masonry cutting—the 1949 Model HD, the Dustless Wet or Dry Cutting Clipper.

FREE TRIAL
You can have a Clipper shipped on Free Trial direct from your nearest Clipper Factory Branch. Priced from $195.00 — Write today for illustrative literature.

MAKE *Any* CUT in Seconds
Smooth and easy cutting action in seconds—not once but every time with a Clipper Saw.

Clipper MANUFACTURING CO.
NATION-WIDE DIRECT FACTORY SERVICE
WARWICK AT 28TH • KANSAS CITY 8, MO.
Factory Branches: PHILADELPHIA • ST. LOUIS • CLEVELAND • AUSTIN, TEXAS • SAN FRANCISCO

▲ Mention Item NED-4077 when writing ▲



Overarm Type has heavy guide pins, ground base 12 by 14 inches.

LINDERME 2-Spindle Head

"increased production from 160 to 600 an hour"

This story is typical of the many applications of Linderme 2-spindle drill heads on long and short runs. You'll like these features: drills, taps—in metal, wood, plastics; quick, accurate adjustment, ½" to 6" centers; two minute set-up on most drill presses in your shop; anti-friction bearings, rugged gearing, quality machining—and Linderme's low initial cost for Overarm or Sleeve Types—Twelve models, capacities up to ⅝", available with G.M. Sleeves or Morse Tapers. Write for complete catalog.

LINDERME MACHINE AND TOOL CO., INC.

12263 COYLE AVE. • DETROIT 27, MICH.

▲ Mention Item NED-4078 when writing ▲

Learn more about

LYON-Raymond's *New* HYDRAULIC Pallet Lift Truck . . .

Streamlined! Lightweight!

Check All These Unusual Features . . .

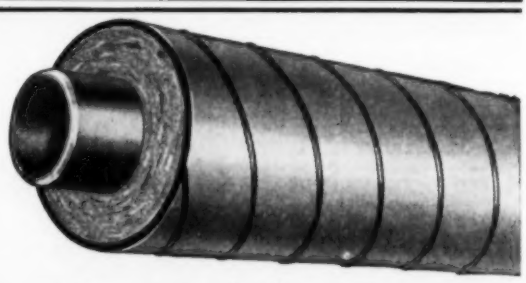
- **FRAME**—High strength alloy sheet steel formed into strong box sections.
- **AXLES**—Heat-treated alloy steel.
- **WHEELS**—(and other non-structural parts) made from aluminum alloy.
- **BEARINGS**—Anti-friction bearings used at all important points in lifting mechanism.
- **WORKING PARTS**—Totally enclosed for better protection.
- **WEIGHT**—Reduced to a minimum by new design and modern lightweight construction.

This advanced construction fits the Lyon-Raymond Hydraulic Pallet Lift Truck to do jobs with speed and ease never before attained by hand pallet trucks. Write today for complete information that may save you time and money!

LYON-Raymond Corporation

800 Madison St., Greene, N. Y.

▲ Mention Item NED-4079 when writing ▲



RIC-WIL *Foilclad* PIPE UNITS

Factory Pre-fabrication and Insulation Assure Dependable System . . . Low Cost Installation

Ric-wiL Foilclad Pipe Units are specially designed for overhead piping of oil, other viscous fluids, process liquids, refrigerants, steam and water.

Custom-built to job specifications, Foilclad Units are shipped in 21-foot lengths, complete with odd lengths and accessories as required, ready for immediate *single-handling* installation. This Ric-wiL Unit System minimizes the costly, tedious and often dangerous field work required by other types of piping installations. And Ric-wiL's *exclusive* method of factory pre-fabrication and insulation assures a pre-tested, dependable, permanent system, eliminates maintenance and repair expense otherwise frequently required.

Write for Folder 4708, The Ric-wiL Co., Cleveland, O., Dept. 17J.

RIC-WIL

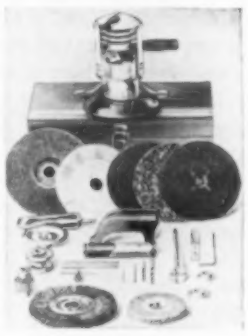
INSULATED PIPE CONDUIT SYSTEMS

THE RIC-WIL COMPANY • CLEVELAND, OHIO

CABLE ADDRESS: RICWIL, BENTLEY'S CODE

▲ Mention Item NED-4080 when writing ▲

PORTABLE TOOL SHOP KIT



Containing attachments which enable user to grind, sand, drill, wire brush, buff, mix paint, cut metal and tile and many similar operations, Shop Kit is supplied with bench stand and lightweight steel carrying case. Kit is built around model D-6 portable Guild Combo-Tool which weighs less than 6 pounds and makes it possible by means of accessories to have many types of power tools from same basic unit. Made by **Porter-Cable Machine Co.**, 1710 N. Salina St., Syracuse 8, N. Y.

▲ Mention Item NED-4081 when writing ▲

INDUSTRIAL WHEELS

Capable of providing easy quiet operation when loaded to full rated capacity, heavy-duty molded-on rubber-tired industrial wheels are available in 5 to 16-inch diameters, 1½ to 4-inch tread widths and load ratings from 200 to 1200 pounds. Live rubber tires afford ample resilience without risk of puncture or damage to any type flooring. Wheels are cast in one piece from high tensile strength, close grain aluminum alloy in smaller sizes and cast iron in larger, ribbed for maximum strength with minimum weight. Bearings are of cartridge ball type with inner and outer races designed to eliminate axle and hub wear. Zerk fitting provides lubricating means.

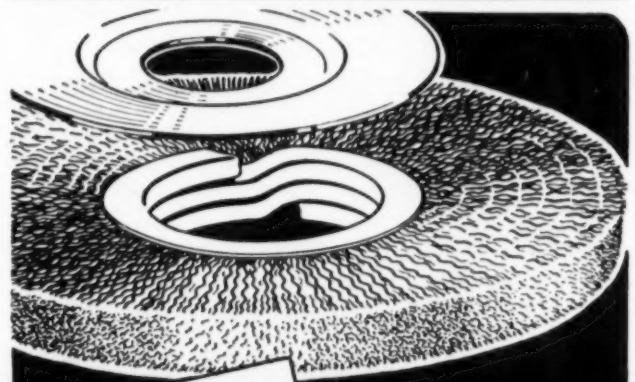
If desired, plain, roller or tapered bearings can be supplied for wheels within any given rating. Made by **Roll-Rite Corp.**, Eighth & Jefferson Sts., Oakland 7, Calif.

▲ Mention Item NED-4082 when writing ▲

GEAR HOBBER

Handling work from 0.050 to 6 inches in outside diameter and delivering 12 hob speeds from 109 to 1259 revolutions per minute, model No. 1 gear hobber hobs small spur, spiral and bevel gears with high accuracy and on fast production schedules. Hob spindle turntable swivels 105 degrees to left and 135 degrees to right. Machine affords helix leads from 0.800 to 130 inches and operates on 1-horsepower motor. Since speed, feed and indexing can be selected independently, quick selection of speed and feed to suit material being worked is possible. Made by **Hamilton Tool Co.**, Hanover at Ninth St., Hamilton, O.

▲ Mention Item NED-4083 when writing ▲



For Tough Brushing Problems use FULLERDISC

. . . the wheel brush with the material anchored in Rigid, Metal Backing

For your *tough* jobs of removing scale, rust, burrs—or of preparing surfaces for welding—or of exacting polishing or coloring—make a test of Fullerdisc Wheel Brushes. They have the stamina for heavy-duty jobs, because with Fullergript a solid, continuous mass of brush material is rolled under extreme pressure into a strip of heavy metal. For complete information about this new and improved wheel brush simply write to . . .

The FULLER BRUSH CO.

FULLERGRIPT ENG. DIV.
3530 MAIN ST.
HARTFORD 2, CONN.

▲ Mention Item NED-4084 when writing ▲

the case of the walking ducks

Occasionally engineering resourcefulness can spotlight an otherwise plain industrial product with a new and unusual use . . . such as the case of this Woven Wire Conveyor Belt installation in a duck brooder. » » » Newly hatched ducklings, it seems, have to be kept moving to be kept alive. Placed on this specially built woven wire belt, moving slowly, the ducklings remain there for eight days . . . continually treadmilling away from the falling end of the belt. Mortality rate dropped to zero! » » » Even if you don't operate a duck hatchery, call in a Cambridge engineer whenever you have a problem concerning the movement of materials or products during processing. » » » Let him explain the superior construction features of **CAMBRIDGE Woven Wire Conveyor Belts.**

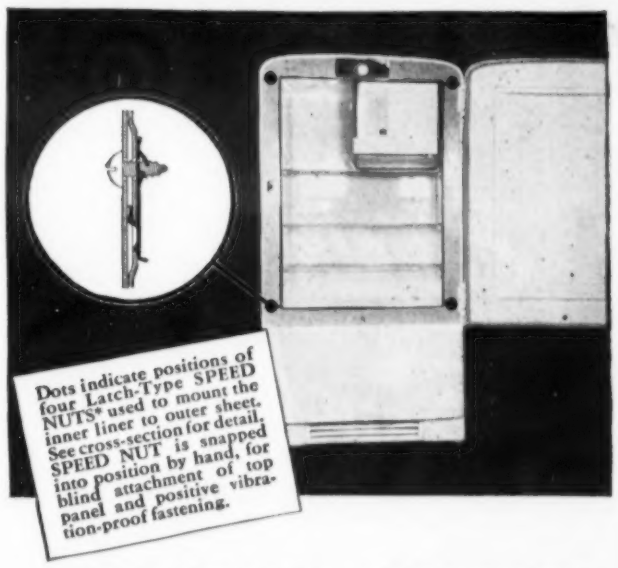
This illustrated 130 page catalog --FREE--to men concerned with production control. Write now.

CAMBRIDGE WIRE CLOTH CO.

Dept. C • Cambridge 6, Md.

BOSTON • NEW YORK • BALTIMORE PITTSBURGH • DETROIT • ST. LOUIS CHICAGO • SAN FRANCISCO • HOUSTON

▲ Mention Item NED-4085 when writing ▲



INTERNATIONAL HARVESTER

Cuts cost 42%

on Refrigerator Application

When International Harvester used four Latch-Type SPEED NUTS* to replace four projected weld nuts on their new refrigerator, these important benefits were gained:

1. Cost of fasteners was reduced 24% . . .
2. Portable welding equipment was transferred to other jobs . . .
3. *Total assembly savings of 42% was effected!*

Just this *one* of the many Speed Nut applications on this product created a savings of major proportions.

In your search for ways to reduce *your* costs or improve product quality, why not investigate the Tinnerman SPEED NUT brand of fasteners? The complete line includes more than 4000 shapes and sizes.

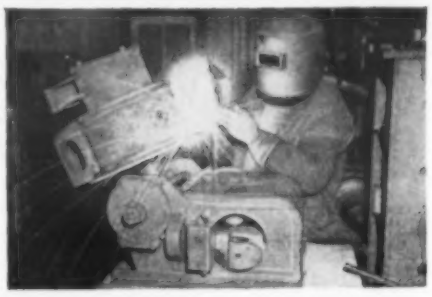
Let us conduct a thorough Fastening Analysis of your product. Your Tinnerman representative can supply details. He's listed in major city phone directories. Or write: TINNERMAN PRODUCTS, INC., 2040 Fulton Road, Cleveland 13, Ohio. In Canada: Dominion Fasteners Limited, Hamilton.

TINNERMAN *Speed Nuts*

FASTEST THING IN FASTENINGS

▲ Mention Item NED-4086 when writing ▲

MORE WELDS -LESS TIME



with Worthington-Ransome Positioners

Your welder gets more arc time out of each working hour when the work is positioned for economical "downhand" welding. He can use heavier electrodes, too, for better welds.

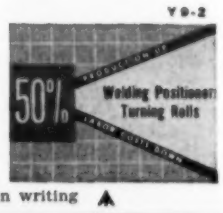
Capacities from 100 lb to 20 tons. Also: Turning Rolls from 3 to 75 tons, stationary and self-propelled.

Write for Bulletin 210C Worthington Pump and Machinery Corporation, Welding and Assembly Positioning Equipment Division, Dunellen, N. J.

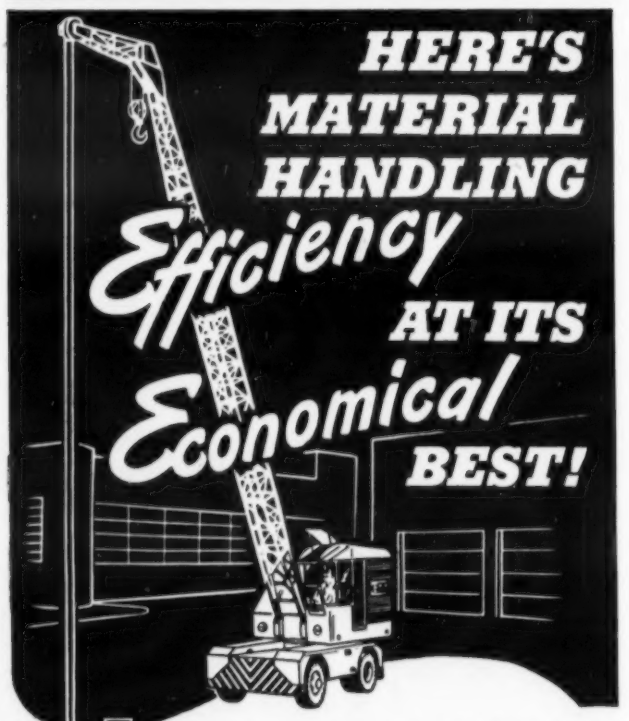
WORTHINGTON

WORTHINGTON-RANSOME WELDING POSITIONER

Y 9-2



Mention Item NED-4088 when writing



This is the Byers Traveler, *the highly mobile* one-man-operated *industrial yard crane, clamshell or shovel.*

The Byers *Traveler* is useful and a "must" in a dozen places at almost the same time in the average large factory receiving, shipping or storage yard. Its speed of operation and unmatched flexibility make it easy for the Traveler to . . . PICK IT UP HERE — TAKE IT ANYWHERE — SET IT DOWN THERE

Its extra short wheelbase permits turning in narrow aisles.

Its speed of travel, traction effort with two or four wheel drive, air braking power and hydraulic steering are all specially designed for this unit.

Its Airflex clutches run amazingly cool. They eliminate all clutch adjustments, assuring continuous and uninterrupted daily production.

Investigate Byers *Traveler* for moving materials on skids, on pallets, in boxes or bulk. Study its adaptability to handling oversize extra long-wide-or-high loads. Analyse possible economies with the Traveler's long boom ability to build higher stockpiles, reach far out, pick up or set down.

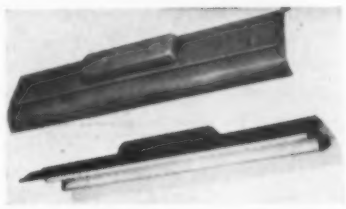
Ask for the complete illustrated *Traveler* Catalog today.

READILY ADAPTABLE TO

THE BYERS MACHINE CO.
100 SYCAMORE ST. • RAVENNA, OHIO
Distributors in all Principal Cities

Mention Item NED-4089 when writing

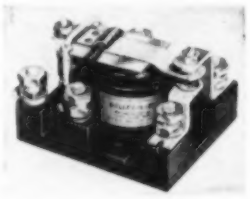
INDUSTRIAL FIXTURE



Consisting of one-piece chassis, reflector, two 40-watt lamps and Glostat starter, Economy model EF-240 industrial type fluorescent lighting fixture is supplied completely wired and ready for installation. Features include standard knockouts for easy conduit entrance, lanced-out hanging ears for chain mounting and cutoff adequate for many industrial applications. Fixture requires no tools for cleaning or maintenance and is Underwriters' Laboratories approved. Made by **Sylvania Electric Products Inc.**, Dept. JPW, 500 Fifth Ave., New York 18, N. Y.

Mention Item NED-4090 when writing

RELAY

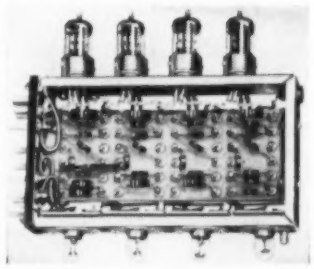


Magnetically operated bulletin 103 relays fulfill aircraft requirements and are also suitable for remote and automatic control purposes where conditions of vibration and shock are encountered. Direct current relays withstand acceleration tests above 10 gravitational units and 60-cycle vibrations of 1/32-inch amplitude.

Basic parts are mounted on molded phenolic base with front-connected post type terminal inserts. Contact gap, tail spring and normally closed contacts are adjustable. Standard single-pole double-throw relays are rated as follows: normally open contacts, 25 amperes, 24 volts direct current or 115 volts 50-60-cycle alternating current; normally closed contacts, 2 amperes on direct current or 115 volts 50-60-cycle alternating current. Continuous duty coils are available for operation up to 115 volts direct current or 230 volts 60-cycle alternating current. Made by **Ward Leonard Electric Co.**, 51 South St., Mt. Vernon, N. Y.

Mention Item NED-4091 when writing

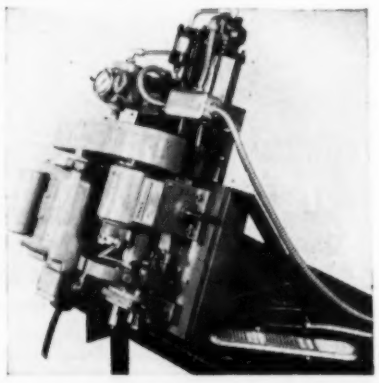
ELECTRONIC COUNTER



Tested by several years operation in counter chronographs and in numerous industrial applications requiring precise count for packaging or automatic machine control, high speed electronic counter decades can now be obtained separately or in custom designed equipment. As such they can be used for pulse and sine wave counting, precision timing, frequency measurements, memory and translation, and fluid and gas flow measurement. Illustrated plug-in decade utilizes four type 12AU7 tubes and can be used at counting rates up to 130,000 per second with absolute accuracy. It features direct decimal readout (0-9) on four neon glow lamps which are designated 1-2-4-8. Readout can be obtained without complex resistor matrix. Number of decades can be connected in tandem to provide any desired registration capacity, and predetermined counts can be selected by means of rotary selector switch which presets complement of desired number into decade. Made by **Potter Instrument Co.**, Dept. A, 136-56 Roosevelt Ave., Flushing, N. Y.

Mention Item NED-4092 when writing

END FINISHING MACHINE



Automatic air operation for high speed tube deburring and other end finishing operations is possible with series 600 tube and rod end finishing machine. Foot-switch operated air cylinder with Hydro-Check control leaves operator's hands free to handle work up to 2 inches in diameter at production speeds of 800 to 1200 tube ends per hour. Chuck and work-feed action is taken from direct pull of air cylinder which provides rapid forward and reverse travel of work to tool with adjustable Hydro-Check to control feed speed and depth of cut. Selection of eight spindle speeds is obtained from step sheave V-belt drive to secure maximum tool efficiency for any work diameter within 2-inch capacity of machine. Tooling can be furnished also for center drilling, rod chamfering, drilling, reaming, pointing and boring. Made by **Pines Engineering Co.**, 695 Walnut St., Aurora, Ill.

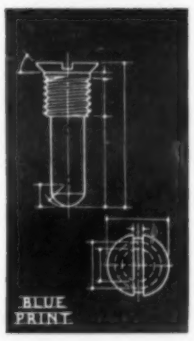
Mention Item NED-4093 when writing

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.

CHARLES W. KRIEG COMPANY
48-60 Dickerson St. - HUmboldt 5-2000 - Newark 4, New Jersey

Mention Item NED-4094 when writing



IF IT'S SPECIAL SEE PROGRESSIVE

QUALITY PROMCO BRAND

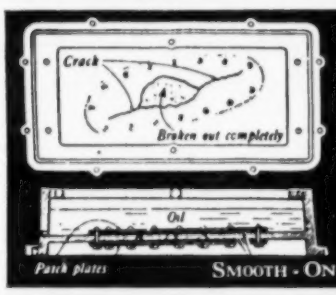
ENLARGED VIEW

KEEP YOUR COSTS DOWN

Progressive specializes in manufacturing special heads, threads and finishes on any metal or alloy adapted to cold upset. Please write for catalog showing many Progressive specials. Catalog includes purchasing and engineering helps.

The PROGRESSIVE MANUFACTURING CO.
46 NORWOOD ST.
TORRINGTON, CONNECTICUT

Mention Item NED-4095 when writing



BROKEN Oil Reservoir SAVED

Though a piece was broken out of this oil reservoir in a machine base, it saw plenty of service after its Smooth-On repair. The piece was fitted in, Smooth-On No. 1 Iron Cement was applied and patch plates bolted on. The repair hardened tight and stayed tight, because Smooth-On expands slightly as it sets.

Order Smooth-On No. 1 in 1-lb., 5-lb., 20-lb. or larger size from your supply house. If they haven't it, write us.

80-318

FREE REPAIR HANDBOOK

Shows lasting, economical repairs you can make on plant, shop and home equipment, saving time, saving money. Cracks stopped, leaks sealed, loose parts tightened. 40 pages. 170 pictures. Write for YOUR free copy now.

SMOOTH-ON MFG. CO., Dept. 10F
570 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON
THE IRON CEMENT OF 1000 USES

Mention Item NED-4096 when writing

CUT COSTS!
SAVE SPACE!
INCREASE PRODUCTION!

The General Box

SEND FOR THIS FREE BOOKLET TODAY!

GENERAL BOX COMPANY..
★★★★★ engineered shipping containers

GENERAL OFFICES: Illinois & Dearborn Sts. Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon, Natchez • Continental Box Company, Inc.: Houston, Dallas

▲ Mention Item NED-4097 when writing ▲

IMMEDIATE DELIVERY

STEEL LOCKERS by MEDART

Medart *all-steel* Lockers are now available for *immediate delivery* . . . In sizes and types to fit every industrial need . . . Medart has been supplying lockers to industry for more than a quarter of a century . . . Remember! There are other lockers that have some features that were originally developed by Medart . . . only MEDART LOCKERS have all those features which have earned for Medart the slogan "The Standard of Comparison."

Write for Descriptive Literature and Prices.

FRED MEDART PRODUCTS, INC.
3539 DEKALB STREET
ST. LOUIS 18, MISSOURI

▲ Mention Item NED-4098 when writing ▲

PROFILE GRINDING MACHINES

Designed for high speed precision grinding of internal and external contours and curved, odd and irregular surfaces, bench-type profile grinding machines are especially adapted to grinding die clearances; sharpening cutter dies and punches; grinding cams and finishing hardened steel parts. Features include collet chuck which permits easy removal and insertion of grinding wheels, built-in diamond wheel dresser, compound tilting mechanism which tilts work table 30-degrees to front and 15-degrees to side, and vertical adjustment of 3¼ inches which permits using and dressing mounted wheels up to this height. Standard and high speed models for mounted stone and high speed carbide wheels respectively differ only in spindle speed. Made by **Rice Pump & Machine Co.**, 1024-H S. 40th St., Milwaukee 4, Wis.

▲ Mention Item NED-4099 when writing ▲

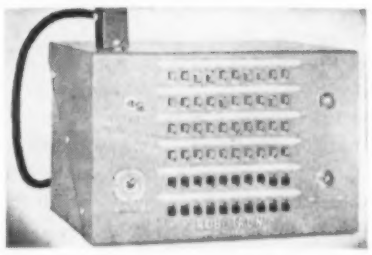
BARREL STAND

Of arc welded construction, portable Wizard barrel stand allows barrels to be raised for draining contents into smaller containers. Unit is equipped with wrought-iron toes for maximum strength, hardwood handles which are extendable for greater leverage, steel rollettes on top of stand to permit barrel being turned into desired position and semisteel or rubber-tired wheels for portability. Made by **Modern Equipment Co.**, Dept. S-1, 2011 Cuming St., Omaha 2, Nebr.

▲ Mention Item NED-4100 when writing ▲

HYDRAULIC PRESS CONTROL

Operating as positive electrical switching device, Robotron model No. 140-X control unit is designed to perform automatic bumping operations on hydraulic presses. It can be set to give from 1 to 40 bumps per cycle of operation and can be used also to control overall cure time. Unit is equipped with three built-in time arrangements, any one of which can be selected by means of proper switch. Control is wired for use with limit switches to regulate amount of press opening during bumping operations, to close press after predetermined time and to hold press closed until next bump. Range of 21 different cure times for each setting of time range switch is provided, and bumps can be timed to be alternating or consecutive, as required. Made by **Emmett Machine & Mfg., Inc.**, 2249-13 Fourteenth St. S.W., Akron 14, O.



▲ Mention Item NED-4101 when writing ▲

Stanzoil Black Neoprene Impregnated Canvas Gloves

Low Cost Comfortable Protection

For extra-durable protective service, safety against leaks or damage by oils, acids or other harmful materials — it pays you to buy the gloves your workers like to wear — Stanzoils.

The black, neoprene-impregnated, canvas G-25 Stanzoils wear extra long in any service. Slip-proof surface aids worker dexterity, gauntlet wrist offers added protection. Stanzoil R-27's in safety red color warn workers when fingers are dangerously near moving machinery. Prevent injury claims — increase your plant's output — insist on Stanzoil Industrial Gloves. Write today for informative catalog.

Synthetic Rubber Division
The Pioneer Rubber Company
634 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles, California

STANZOIL BY PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

▲ Mention Item NED-4102 when writing ▲

YOU TRY IT TEST IT PROVE IT FREE

New TORNADO* Floor Machine

FAST, THOROUGH, EASY-TO-USE—
DOES ALL FLOOR MAINTENANCE WORK

A new, scientifically designed all-purpose floor machine which does better work, is correctly balanced for rapid performance, is easily controlled and handled, and is adjustable to operator. Quickly disassembled for storage and transport.

Write today for details of our free trial offer which enables you to try this better floor machine on your own work under your own conditions.

*Trade Mark Reg. U.S. Pat. Off.

FREE TRIAL OFFER

BREUER ELECTRIC MFG. CO.
5098 Ravenswood Avenue • Chicago 40, Illinois

▲ Mention Item NED-4103 when writing ▲

New . . . a cost-saving

EXCHANGE PLAN

for TRI/CLAD Integral-hp Motors

LOOK for this EXTRA on the motors you buy

General Electric is happy to announce that the motor exchange plan which proved so successful with fractional-hp motors has been extended to cover most popular types of Tri-Clad dripproof motors—one to five hp. How the plan works to reduce machine down time and motor replacement costs is told in Bulletin GEA-5189 (for motor users) and Bulletin GEA-5180 (for machinery manufacturers). SEND FOR YOUR FREE COPY to *Apparatus Department, General Electric Co., Schenectady 5, N. Y.*

756-21

GENERAL ELECTRIC

▲ Mention Item NED-4104 when writing ▲

the MODERN WAY . . . to operate

HANNIFIN . . .
Air Control Valve!

SEE IT! TRY IT! You'll be amazed at the difference it makes when you use this new Hannifin push button operated air control valve. Without effort, a quick, full power stroke every time! No throttling possible; no short-stroking. Use it to boost production.

10 WATT SOLENOIDS—No pounding . . . no noise . . . no relays needed. Solenoids continuously rated; only momentary contact required. Speeds of 180 cycles per minute, or more!

PILOT TYPE—Remarkably simple! An exclusive Hannifin development. Thoroughly tested. Air pressure does the work with a double-acting piston that operates stainless steel reciprocating disc. No packing or seals to maintain.

NO PACKING TROUBLES—Metal-to-metal lapped valve seat. Long life; little or no maintenance. Remarkably compact. Strikingly styled.

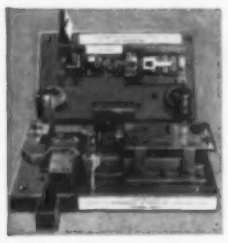
TO MEET YOUR REQUIREMENTS—Type I: Fingertip control of advance and return cylinder strokes through two push buttons. Type II: Single push button control; equivalent to spring return valve action. 3-way or 4-way types. Ideal for remote control . . . building into equipment. Sizes ⅜", ½", and ¾". For any pressure from 25 to 150 psi. WRITE FOR DESCRIPTIVE LITERATURE.

HANNIFIN CORPORATION
1101 South Kilbourn Avenue Chicago 24, Illinois

▲ Mention Item NED-4105 when writing ▲

EQUIPPED TO SERVE YOU ECONOMICALLY • GEARED TO SERVE YOU QUICKLY AND INTELLIGENTLY • ANYTHING IN SHEET METAL FABRICATION AND STAMPINGS

SLASH — Production Time! — CUT COSTS by letting QUALITY HELP you SOLVE YOUR PROBLEMS for DIES • TOOLS JIGS



A 4 station progressive Die.

If you desire we can do your Metal Stampings and Light Assembly.

Also Fabrication work if you require.

Quality Hardware one of the largest and most modern equipped shops in the country, highly skilled mechanics and management over 30 years' experience and know-how.
Assembly includes: welding, riveting, soldering and bench work. Large volume jobs including packaging and shipping.
TOOLS for high Production or SINGLE operation TOOLS if desired.

Phone Wire or Write us your Problems

QUALITY HARDWARE & MACHINE DIVISION
CONTINENTAL COPPER & STEEL INDUSTRIES, INC.
5835 N. Ravenswood Ave., Chicago 26, Illinois

▲ Mention Item NED-4106 when writing ▲

TRY UP AND OVER HANDLING

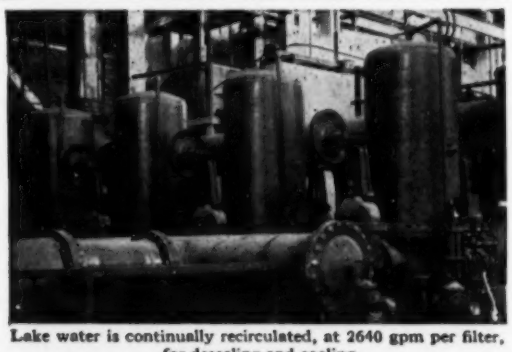
before you decide upon any material handling equipment . . .

If you are in the market for any material handling equipment, see our movie first. We will gladly lend you the film for showing in your offices at a time most suited to your convenience. Please drop us a line.

*UP and OVER is the title of our 20 minute 16 mm sound film.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ Mention Item NED-4107 when writing ▲



Lake water is continually recirculated, at 2640 gpm per filter, for descaling and cooling.

Water Shortage?

Cuno Flo-Klean Filter makes raw water suitable for many plant services . . . keeps recirculated water clean . . . is self-cleaning without waste of backwash fluid.

And—for *any* low-viscosity fluid carrying abrasives—install Cuno Flo-Klean. Permanent wire-wound cartridge positively removes all solids larger than spacing specified.*

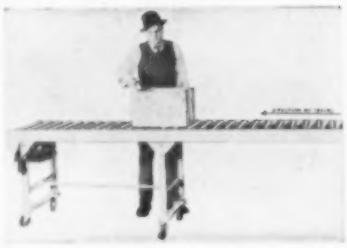
FREE FLO-KLEAN BULLETIN—Address Cuno Engineering Corp., 708 South Vine St., Meriden, Conn.

*Available spacings from .0025 in. to .020 in.

CUNO *Fluid Conditioning*
Removes More Sizes of Solids from More Types of Fluids

▲ Mention Item NED-4108 when writing ▲

LIVE ROLLER CONVEYOR



Design feature of this safety type live roller conveyor is roller actuating transmission which consists of motor driven roller chain mounted at one side of frame, engaging sprockets attached to hexagon through shafts. This chain provides positive driving of axles. Result is that with or without load, rollers can be stopped by slight pressure of hand; and if line becomes filled with commodities, bearings turn, thus making rollers stationary. Made by **Standard Conveyor Co.,** 831 E. Seventh St., North St. Paul 9, Minn.

▲ Mention Item **NED-4109** when writing ▲

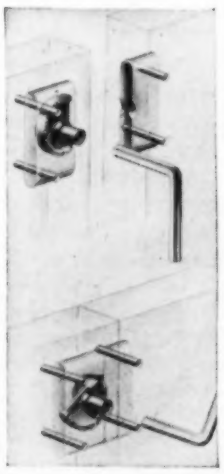
PIPE LINE STRAINERS

Available in three sizes, pipe line strainers are constructed of nonferrous metals to resist rusting, freezing and corroding. Housing shell is heavy drawn brass 1¾ inches in diameter and with brass fittings brazed to housing body.

Water, air or gas enters strainer through ⅜-inch internal pipe thread inlet at side, passes through screen and flows through ⅜-inch internal pipe thread outlet at top of strainer. Unusually large screen areas assure efficient removal of dirt, rust, scale and other foreign matter without effecting noticeable drop in line pressure. Without disturbing pipe connections, 80-mesh Monel woven wire screens can be removed quickly for cleaning. Large storage space around screen allows long service between cleaning periods. Made by **Maid-O'-Mist, Inc.,** 3217 N. Pulaski Rd., Chicago 41, Ill.

▲ Mention Item **NED-4110** when writing ▲

PANEL FASTENER

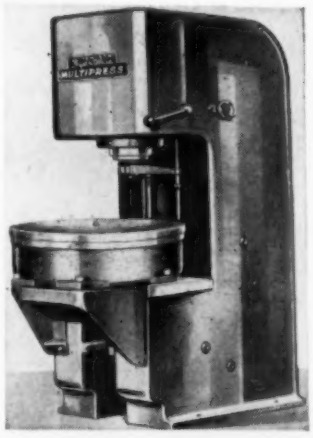


Used to join honeycomb panel or other sandwich-type construction materials as well as all sheet materials, this Roto-Lock butt-joint panel fastener features tapered cam design and is not affected by severe temperature conditions. Design of male and female components enables it to be used to attach vertical to horizontal panels and permits application in shelter construction as well as permanent partition and panel construction.

Fastener draws panels together at sufficient pressure to establish air and water-tight seal and will carry 1400-pound tension load and heavy shear loads. It can fasten in misaligned conditions in all directions and locks in any semiopen position necessitated by obstructions. It can be side-mounted or recessed completely into panels, leaving no exposed parts. No through parts are used, and heat or cold is not transmitted from exterior to interior surface. Cam is actuated by hex wrench, screwdriver, or other hand tool. Maed by **Simmons Fastener Corp.,** Box 1230, Albany 1, N. Y.

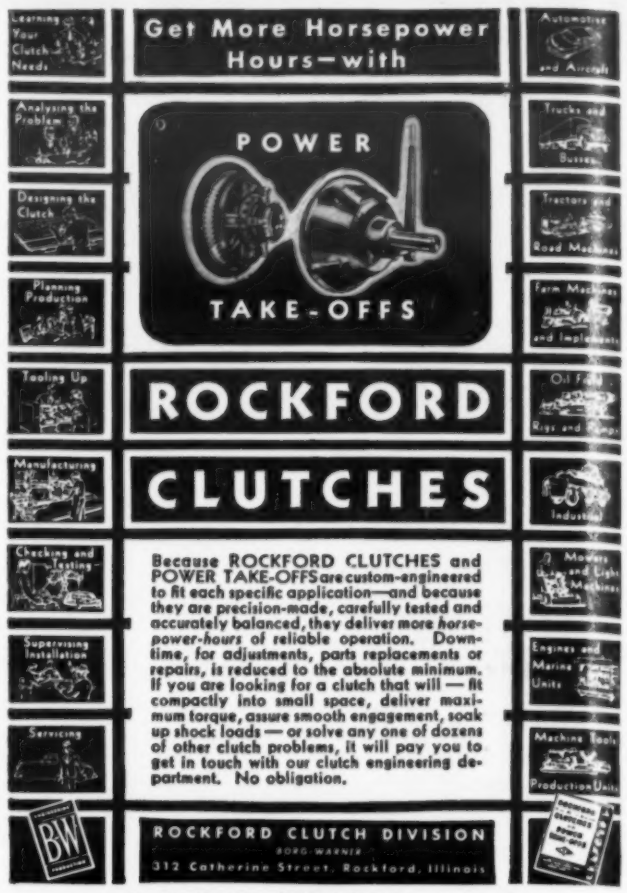
▲ Mention Item **NED-4111** when writing ▲

HYDRAULIC PRESS



Fast action with high-tonnage pressures under accurate regulative control are features of 25-ton oil-hydraulic floor model Multipress. Press has 15-inch stroke, 25-inch daylight opening and 12-inch throat to provide ample die space in keeping with increased tonnage capacity. Its precision adjustments for multiple ram actions give flexibility for applications in many industries. Approach of ram to work is variable and can be preset at any speed desired up to 530 inches per minute. Other operational factors that can be preset include ram stroke length, pressing speed and ram pressure. Press can be equipped with choice of controls including dual hand lever, single lever, foot pedal or electric pushbutton types. It can be operated also with automatic valve controls for single cycling, continous cycling or vibratory repeat strokes. Automatic features can be further extended by installing 33-inch diameter index table which moves parts under press ram automatically and provides indexing for either 6 or 12 stations. Made by **Denison Engineering Co.,** 1152 Dublin Rd., Columbus 16, O.

▲ Mention Item **NED-4112** when writing ▲



Get More Horsepower Hours—with

POWER TAKE-OFFS

ROCKFORD CLUTCHES

Because ROCKFORD CLUTCHES and POWER TAKE-OFFS are custom-engineered to fit each specific application—and because they are precision-made, carefully tested and accurately balanced, they deliver more *horsepower-hours* of reliable operation. Downtime, for adjustments, parts replacements or repairs, is reduced to the absolute minimum. If you are looking for a clutch that will — fit compactly into small space, deliver maximum torque, assure smooth engagement, soak up shock loads — or solve any one of dozens of other clutch problems, it will pay you to get in touch with our clutch engineering department. No obligation.

ROCKFORD CLUTCH DIVISION
BORG-WARNER
312 Catherine Street, Rockford, Illinois

▲ Mention Item NED-4113 when writing ▲

compare the SPECIFICATIONS of these 11" Logan LATHES then compare the PRICE*

Quick Change Gear Floor Model Lathe, 11" Swing, 1" Collet Capacity, 1½" Spindle Hole, 24" and 36" between centers

$525.00 and $565.00

Quick Change Gear Cabinet Model, 11" Swing, 1" Collet Capacity, 1½" Spindle Hole, 24" and 36" between centers

$725.00 and $782.50

By their capacity, speed, and accuracy, the new 11" Logan Lathes satisfy a definite need of industry, shops and schools. Due to efficient production, they are priced substantially lower than any other lathes of comparable quality and specifications.

Available in bench, floor cabinet and turret models
Write for data on Logan 9", 10" and 11" Lathes and 8" Shapers

They Have CAPACITY
1" draw-in collet capacity, 1½" spindle hole, 24" and 36" center distances.
They Are ACCURATE
Ball bearing spindle mounting assures sustained accuracy at any speed from 45 to 1500 rpm without bearing adjustment. Two V-ways and two flat bed ways precision ground to a tolerance of .0005". Total spindle run-out is held to within .0005" twelve inches from the bearings.
They Are DURABLE
Rugged overall construction withstands years of hard usage with a minimum of maintenance and maximum of accuracy. Self lubricating bronze bearings protect against wear at 35 points.
They CUT COSTS
Low price, low operating cost, low maintenance, quick set-up, versatility, lasting accuracy and high production all contribute to the reduced costs and increased operating profits these 11" lathes make possible.

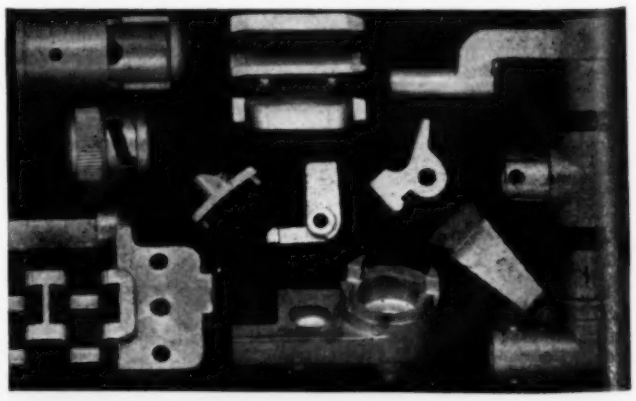
LOGAN ENGINEERING CO.
4901 WEST LAWRENCE AVE. • CHICAGO 30, ILL.

*SCREW CUTTING LATHES $485.00 to $782.50
TURRET LATHES $735.00 to $965.00
Prices F.O.B. Factory

LOOK TO *Logan* FOR BETTER LATHES and SHAPERS

▲ Mention Item NED-4114 when writing ▲

SMALL...INTRICATE ACCURATE...QUICK



Small Precision Castings in ferrous and non-ferrous metals, of various alloys, are our specialty. Sizes range from the smallest which run 750 castings per ounce to the largest which are about three pounds each. All meet highest standards of accuracy and can be produced in large quantities or on a small experimental basis. These intricate investment castings may be the answer to your problem. Write for complete information.

PRECISION METALSMITHS, INC.
6511 Cedar Ave. **Cleveland 3, Ohio**

▲ Mention Item NED-4115 when writing ▲

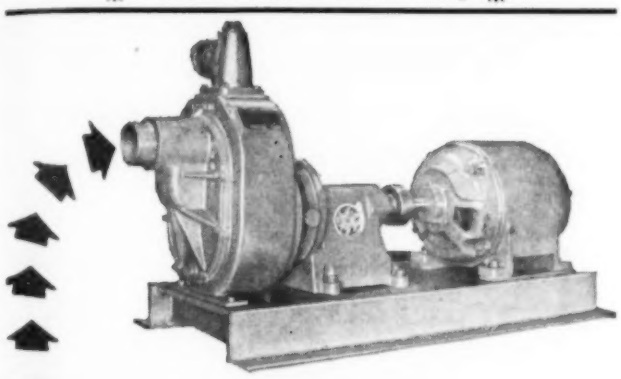
NOT IN *LEKTROMESH*

Lektromesh, the new, smooth, one-piece metal-plated screen, is readily fabricated by stamping, welding or soldering. Ideal for fuel strainers, dry screening and other applications. The accurate uniformity of openings, the smooth wear-resistant surface and its ability to screen without clogging, afford opportunities for increased accuracy, efficiency and economy in industries where present methods of filtering or screening are not wholly adequate. Lektromesh is available in 100 foot rolls up to 35" wide in 40 to 120 mesh . . . 150 to 400 mesh in smaller units.

Lektromesh folder and small sample available. Write Dept. L-211

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE
WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS Jelliff SINCE 1860

▲ Mention Item NED-4116 when writing ▲



HIGH LIFTS

Trust the pumping to a

MARLOW SELF-PRIMING CENTRIFUGAL

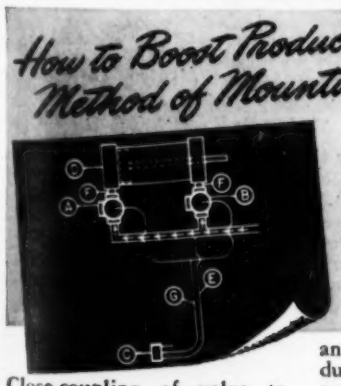
Placed 15, 20—as high as *twenty-five* feet above the liquid—a Marlow industrial pump primes, pumps and reprimes automatically. Marlows handle clear water, coolants, chemical solutions, volatile fluids, liquids containing abrasives . . . Capacities 25 to 3500 gallons per minute. Write for Industrial Pump Bulletin. Marlow Pumps, 590 Greenwood Avenue, Ridgewood, N. J.

Marlow Pumps

Manufacturers of Quality Pumps Since 1924

▲ Mention Item NED-4117 when writing ▲

How to Boost Production with new Method of Mounting Ross Valves



★ Faster Machine Speeds
★ Less Air Consumption
★ Economical Installation
★ Easier Operation

Close-coupling of valve to cylinder! That's the story behind the remarkable success of the *new Ross In-Line Master Valve.*

Users claim several important advantages. By placing the master valves (A & B) at the cylinder (D), air supply and exhaust are speeded up appreciably. This in turn permits faster movement of the cylinder piston and materially increases production.

At the same time, the close coupling means that two lengths of large diameter piping between valve and cylinder—pipes continually filled and exhausted with non-productive air—are replaced by two short connecting pipes (F). The resultant saving in air with every movement of the piston considerably reduces operating costs.

Operation is by a small, conveniently located 3-way pilot valve (C). It is supplied through tubing (E) and connected to the master valves by tubing (G). It may be mechanically, manually or electrically controlled. Hand or foot operation is greatly facilitated by the use of the smaller, more easily actuated pilot model.

For complete details, ask for Bulletin No. 302.

ROSS OPERATING VALVE COMPANY — ROSS The Finest Valves
120 E. GOLDEN GATE AVE., DEPT. 161, DETROIT 3, MICH.

▲ Mention Item NED-4118 when writing ▲

CENTRIFUGAL BLOWER

Balanced fan, antivibration mounting and synchronous motor account for smooth, quiet operation of this small model 805J centrifugal blower. Designed for electronic tube cooling and for ventilating small enclosed areas, it is recommended for use in television cameras, instrument cabinets and radio transmitter cubicles, racks and panels. Light and compact, blower operates on 115-volt 60-cycle alternating current at input of 15 watts with delivery rating of 20 cubic feet per minute. Made by **Fairchild Camera & Instrument Corp.,** 88-06 Van Wyck Blvd., Jamaica 1, N. Y.

▲ Mention Item NED-4119 when writing ▲

BLOWER TYPE UNIT HEATER

Designed for installations which require heated air at high velocities and against high static pressure, series CB gas-fired blower type unit heater features squirrel-cage fan. Unit is equipped with cast-iron heat exchanger and combustion chamber to withstand corrosive effects of burning gases. These are cast in one piece with integral extended heating surface fins on exchanger. Built-in draft hood conserves heat and absorbs all excessive chimney action. Heater is supplied in five sizes with AGA outputs of 172,000, 136,000, 112,000, 84,000 ,and 68,000 British thermal units per hour. Made by **Automatic Gas Equipment Co.,** Dept. 1, 301 Brushton Ave., Pittsburgh 21, Pa.

▲ Mention Item NED-4120 when writing ▲

MAGNETIC PROBE

Made of high strength magnetic alloy and no larger than fountain pen, G-S magnetic probe is useful for removing steel or iron particles from areas where such foreign matter would be harmful. Point of magnet is extended or retracted from bakelite case by turning end knob, with magnetic strength being controlled by amount of extension. Probe can be used also to test coat of surfaces for magnetic properties of under-material. When used in first aid stations, it can be sterilized without harming magnetic properties. Device lists at $6.50. Made by **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ Mention Item NED-4121 when writing ▲

NEW PROVISION FOR PRECISION on multiple spindle machines

SCULLY-JONES
MICRO-NUTS*

You Make "Precision" Adjustments
Make really accurate adjustments on Multiple Spindle Machines to .001 in., by scribing a mark at any point on Spindle (see illustration) and turning easy-to-read, calibrated Scully-Jones Micro-Nut in direction required.

You Save Set-Up Time
Simply give a quarter turn to set-screw, to lock Scully-Jones Micro-Nuts in place at any location on thread of Adapter.

For Both Types of Threaded Adapters
You can use these low-cost Micro-Nuts on present Adapters with or without set-screw slots.

Nothing to Get Out of Order
Simple, trouble-free one-piece design, with vapor blast finish. Scully-Jones Micro-Nuts are machined and hardened to meet our high quality specifications.

2847 NEDR

KEEP INVENTORY DOWN — Your requirements will be filled immediately from our stock of all sizes for Adapters with "Acme" and "V" threads. Write for bulletin giving further details and prices.

Scully-Jones AND COMPANY
1952 S. Rockwell St., Chicago 8, Ill.

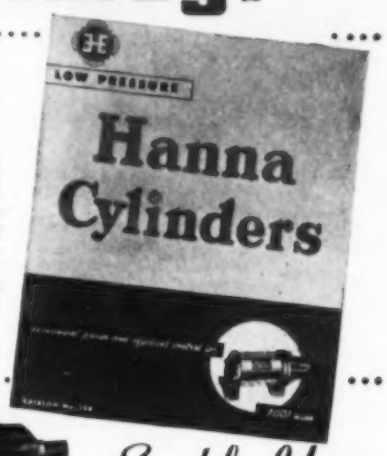
*Patent applied for

YOU GET LOW COST, FAST, ACCURATE PRODUCTION WITH OUR STANDARD AND SPECIAL TOOLS

▲ Mention Item NED-4122 when writing ▲

New Hanna
LOW PRESSURE CYLINDER
Catalog!

New Hanna Catalog 236 gives you the complete story on Hanna Low Pressure Cylinders . . . includes dimension drawings, construction features and capacities of all standard-sized cylinders . . . gives information on mounting brackets, cylinder cushions and accessories . . . 20 pages of cylinder facts . . . a copy is yours for the asking!



Send for Your Copy Today

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1765 Elston Avenue, Chicago 22, Illinois

▲ Mention Item NED-4123 when writing ▲

Oxweld

PORTABLE FLAME-CUTTING MACHINES FILL A VARIETY OF SHOP REQUIREMENTS

This Oxweld CM-16 is designed for oxy-acetylene flame-cutting of steel plate up to 4 inches thick. It travels directly on the work and cuts circles automatically—hand-guided, it cuts irregular shapes. Operated on track this machine cuts straight lines. Adaptors are available for straight-line cutting on thick steel or for beveling. The CM-16 weighs only 45 pounds and is low in price. Write for catalog, Form 4487.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd Street UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ Mention Item NED-4124 when writing ▲

Now Ready

DIALCO

The NEW HANDBOOK

. . . 192 PAGES of USEFUL INFORMATION

Engineers, designers, purchasing agents —

GET YOUR COPY

You will find complete data on the lamps used in pilot lights.

And illustrations — all full size — of hundreds of items you will use.

There is a table of resistors for operation of lamps on all voltages.

Complete dimensional data on each unit.

More than 2,000 Underwriters' Listed Assemblies.

The DIAL LIGHT COMPANY of AMERICA
Foremost Manufacturer of Pilot Lights
900 BROADWAY, NEW YORK 3, N. Y. TELEPHONE SPRING 7-1300

Write for Handbook B-149

▲ Mention Item NED-4125 when writing ▲

COST REDUCTION ON WORK GLOVES

25% longer wear than best previous rubber coating with new plastic rubber

NEOX bonded to high tensile fabric

The resiliency of neoprene is now combined with the extreme durability of plastic to effect a major cost-saving for industrial glove users. Handling sharp or abrasive materials, where oil, grease or solvents are destructive factors, 25% longer service with NEOX is conservative.

Liquid-Proof, Snag-Proof. Strong fabric lining prevents snags and tearing, makes gloves comfortable, easy to slip on and off.

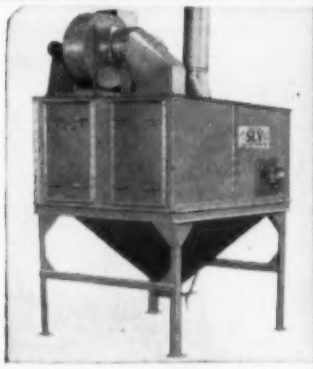
Special Test Offer. Send brief description of your operation, materials handled and temperature conditions. We will forward samples of the type gloves we recommend for comparative test and report. Address

Also plastic and natural rubber coatings, over all or palm only.

Edmont Mfg. Co., 503 Orange St. Coshocton, Ohio
World's largest maker of coated industrial gloves

Edmont FABRIC-LINED NEOX-COATED **GLOVES**

▲ Mention Item NED-4126 when writing ▲



SLY "UNIT" DUST FILTERS

- Low Cost
- Compact
- Easy to Install

Up to 6,000 Cubic Feet of Air per Minute Gets All of the Dust by Filtration Through Cloth

These complete, compact dust filters offer many economies in limited capacity ranges for the purpose of collecting dust from grinding, screening, mixing, packaging, and finishing operations. Often several of these units are employed in preference to a single large collector, for greater flexibility of operation, to save piping, and to keep different materials separate. They have the advantage of greater cloth area per cubic foot of air, hence greater filtering capacity. (Never install a dust filter with less than one square foot of cloth for each four cubic feet of air per minute.)

These "Unit" Filters can be shipped assembled to facilitate installation. For larger air volumes, there are Sly Dust Collectors with unlimited capacity ranges. May we send you complete information?

THE W. W. SLY MFG. CO.
4748 Train Avenue • Cleveland 2, Ohio
Representatives in New York • Chicago • St. Louis • Philadelphia • Detroit Minneapolis • Birmingham • Cincinnati • Los Angeles • Rochester • Toronto

▲ Mention Item NED-4127 when writing ▲

O.K. GANG SLITTER KNIVES *for longer service*

Made in O.K. Battle Axe, Dura-Chrome or Standard Carbon Grades. Precision ground to ±.0002 tolerances on thickness, diameter and bore. Extremely high finish. SPACERS for above in hardened or unhardened grade ground to same tolerances as Slitters. We make rotary cutters similar to the one shown for trimming sheet steel, light plates. Some are made with bevels for cutting paper, rubber, plastic, cloth, etc.

O.K. ROTARY SHEARS & BLADES *for maximum toughness*

The OHIO KNIFE Co.
CINCINNATI 23, OHIO, U. S. A.

CLIP AND MAIL TODAY

THE OHIO KNIFE CO., CINCINNATI 23, OHIO4
Gentlemen: Please send without obligation specific data on knives I have checked.
☐ CIRCULAR KNIVES ☐ SHEAR BLADES
COMPANY_____
NAME_____
ADDRESS_____

▲ Mention Item NED-4128 when writing ▲

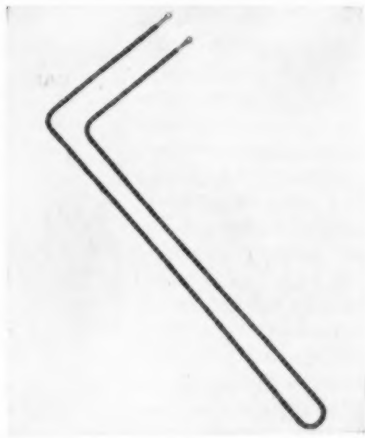
PORTABLE ELECTRIC TIMER

Completely portable Minitrol timer incorporates Telchron synchronous motor and continuous electric alarm buzzer. It can be plugged into any 110-volt 60-cycle power source and can be set to signal elapse of any time up to 60 minutes. Instrument is housed in red, green or ivory plastic case; has easily read dial and plastic indicating knob. Suitable for industrial or professional use, timer is equipped with 6-foot plug-in cord. Made by **Wil-Mar Co.**, Dept. 71, Box 1, Natick, Mass.

▲ Mention Item NED-4129 when writing ▲

IMMERSION HEATING UNITS

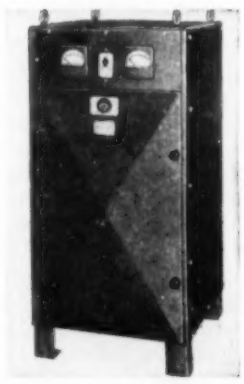
Rated from 200 to 5000 watts and for operation on 115 to 550 volts, electric immersion heaters are sheathed with Carpenter No. 20 stainless steel which permits these units to be used in processes that require boiling dilute solutions of sulfuric and other corrosive acids. They can, however, be used in all concentrations of this acid up to 176° F. Units can be supplied in straight lengths up to 176 inches and can be bent within minimum radius of 1½ inches. Lug type terminals are regularly supplied, but other types can be furnished on request. Made by **Electro-Therm Inc.**, 8018 Georgia Ave., Silver Spring, Md.



▲ Mention Item NED-4130 when writing ▲

BATTERY CHARGER

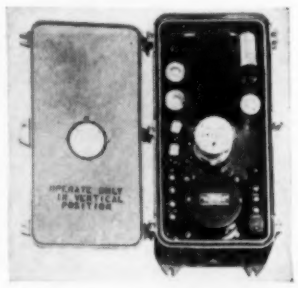
Particularly suited for on-the-spot charging of industrial truck batteries in warehouses, freight terminals, piers, docks and industrial plants, Rectox copper oxide battery charger can be obtained as combination unit to charge either lead-acid or nickel-alkaline batteries. It employs saturable reactor control to provide smooth easily-made adjustment of output by variation of inductance. Use of rheostat control which can be adjusted while energized eliminates necessity of constantly changing taps for high-rate, low-rate aging and line voltage variation. Charging cycle is completely automatic after preliminary selection of rate by turning dial. Charger is designed for operation on either 230 or 460 volts and can charge either type of battery in less than 8 hours. Made by **Westinghouse Electric Corp.**, P. O. Box 868, Pittsburgh 30, Pa.



▲ Mention Item NED-4131 when writing ▲

INDUSTRIAL INTEGRATOR

Designed for use in general industrial and research applications, model 808 industrial integrator provides means for simple and effective integration of direct current potentials or flow rates with respect to time. Fundamental elements of integrator are Weston model 806 integrating relay, electronic relay circuit with associated sealed reed type relays and counting mechanism. Relay circuit is operated to initiate oscillatory action, frequency of which is proportional to input. Counter totalizes number of cycles to provide running time-integral of input.



Sensitivity of device makes it applicable to light integration, direct current ampere-hour integration from low potential shunts, watt-hour integration using thermal converters, total radiation integration using thermopiles, integration of nuclear radiation and integration of quantities measured by changes in transmitted light. Made by **Weston Electrical Instrument Corp.**, 663 Frelinghuysen Ave., Newark 5, N. J.

▲ Mention Item NED-4132 when writing ▲

A SPACE SAVER!

The Penco Two-Person Steel Locker, Type 734, is designed for use in cramped quarters or for any installation where a saving in floor space is an important consideration. Two persons are comfortably accommodated in the space usually allotted to a single person.

The Usual High Quality Penco Construction Conforms to Federal Government Specifications

Write for literature. Permit Penco Engineers to determine the most efficient arrangement for your requirements.

PENN METAL CORPORATION of PENNA.

1869 Penco
Reg. U. S. Pat. Off.

L. Lewis Sagendorph, Founder,
82 Oregon Ave.
Philadelphia 48, Pa.

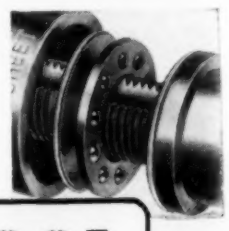
Fabricators of Steel Lockers, Cabinets, Shelving and Corrugated Metal Pipe
In Business Continuously Since 1869

▲ Mention Item NED-4133 when writing ▲

For tube sheet thicknesses ½" to 2¼"

The new G-800 condenser and heat exchanger expander has many advantages. It lasts longer and gives finer performance . . . ball bearing thrust* eliminates friction drag . . . tapered offset rolls produce uniform expansion and tightness throughout the full thickness of the tube sheet . . . proper length of rolls with a gradual front radius prevents any sharp offset inside the tube. LIKE ALL AIRETOOL EXPANDERS, G-800 is self-feeding and parallel rolling, gives smooth, safe, fast expanding operations.

* view of ball bearing thrust mechanism



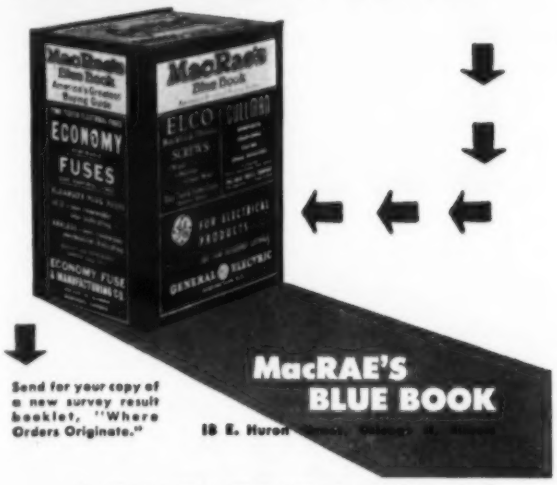
For more information write The Airetool Manufacturing Co., 308 S. Center St., Springfield, Ohio.

AIRETOOL MANUFACTURING COMPANY
SPRINGFIELD, OHIO

BRANCH OFFICES:
New York, Chicago, Philadelphia, Baton Rouge, Houston, Tulsa

▲ Mention Item NED-4134 when writing ▲

At 9 out of 10 of the largest and most important decision points in American industrial purchasing, MacRAE'S BLUE BOOK is used as a reference source "principally" or "exclusively."



Send for your copy of a new survey result booklet, "Where Orders Originate."

18 E. Hurod

▲ Mention Item NED-4135 when writing ▲

Marvinol® vinyl resin offers

- **superior characteristics**
- **faster processing**

Plastics products based on Marvinol VR-10 have superior dimensional stability under heat and time . . . greater flexibility at low temperatures. Marvinol offers extra toughness and dryness with a surface that's pleasant to touch. It can be calendered, extruded, injection molded or dispersed for coatings or slush molding.

Marvinol saves processing time. It has shorter pre-mix, open mill and Banbury cycles . . . faster extrusion.

Marvinol-based products resist tear, wear, oils, acids and abrasion . . . may be clear, translucent or opaque, delicately or brilliantly colored.

The Glenn L. Martin Company makes and sells Marvinol to processors as a raw material. We compound and fabricate *only* in our customer service laboratories for *your* benefit. So for information, or for the name of someone now processing Marvinol to the stage required by your operation, write to Chemicals Division, Dept. N E-6, The Glenn L. Martin Company, Baltimore 3, Md.

Martin Marvinol

Resins, Plasticizers and Stabilizers Produced by the Chemicals Division of
THE GLENN L. MARTIN COMPANY • AN INTERNATIONAL INSTITUTION
"Better Products, Greater Progress, Are Made by Martin."

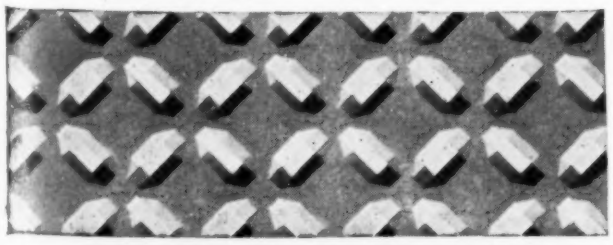
▲ Mention Item NED-4136 when writing ▲

Nature protects the Armadillo

. . . but your plant workers are not so fortunate. When they slip and fall on smooth, greasy floors no armor plate protects them. They are wide open to serious injuries. You can help protect your workers—and reduce lost man-hours—by installing U·S·S Multigrip Floor Plate wherever sure footing is essential. Wet or dry, Multigrip gives positive tractions and skid resistance in every direction.

For safety, economy, and durability you can't beat U·S·S Multigrip Floor Plate.

Get further information about Multigrip from your nearest steel warehouse or write to us direct.



Carnegie-Illinois Steel Corporation, Pittsburgh and Chicago
Columbia Steel Company, San Francisco, Pacific Coast Distributors
Tennessee Coal, Iron & Railroad Company, Birmingham, Southern Distributors
United States Steel Export Company, New York
9-375

USS

MULTIGRIP FLOOR PLATE

UNITED STATES STEEL

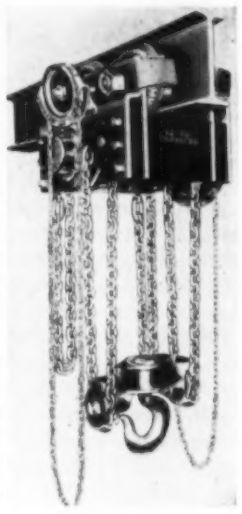
▲ Mention Item NED-4137 when writing ▲

PNEUMATIC VIBRATORS

Five different mounting arrangements are available in these series SA pneumatically operated vibrators. They can be used on bins or hoppers to assure flow for parts feeding, on vibrating tables for product packaging, on fatigue testing units and other applications where constant or intermittent vibration is required. Seven sizes are available with ⅜ to 1¼-inch pistons and speeds of 5100 to 1950 cycles per minute. Chromed steel body is micro finished, and ground chrome-plated piston is heat treated. Made by **Cleveland Vibrator Co.,** 2744 Clinton Ave., Cleveland 13, O.

▲ Mention Item NED-4138 when writing ▲

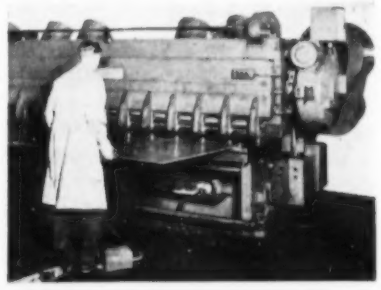
TROLLEY HOISTS



Raising of load to maximum height with minimum headroom is performed by Beam-Hugger trolley hoists. When hook is in raised position, shank touches beam so that required headroom is reduced to length of hook. Manufactured in 13 sizes with from 1 to 24-ton capacities, hoists are available in either plain or geared trolley type. Hoisting mechanism employs two load sheaves with four strands of chain supporting load. Wheels are equipped with tapered roller bearings, and gears are machined chrome-manganese steel. Hoists are built to fit beams of standard size and style. Made by **David Round & Son,** Broadway & Henry, Cleveland 5, Ohio.

▲ Mention Item NED-4139 when writing ▲

ELECTRIC CLUTCH CONTROL



Handling time can be decreased and output of machine increased when this remote control electric clutch attachment is used with all steel shear while handling large volume of wide or long plates or sheets. Application of this unit allows one man to operate shear safely without assistant to trip conventional clutch lever. Illustration shows operator shearing ⅜-inch plate 12-feet wide while utilizing remote control foot switch instead of treadle. Clutch control can be furnished also with two foot switches and selector for single or double operator control. Made by **Cincinnati Shaper Co.,** Garrard & Hopple Sts., Cincinnati, O.

▲ Mention Item NED-4140 when writing ▲

New GOULDS Self-Priming Sump and Utility Pump

Fig. 3232

The utility pump (fig. 3230) is same as sump but without float switch and suction pipe.

APPLICATIONS: Adaptable to wide variety of uses—draining cellars, elevator pits, returning drainage to hot wells, draining vats, transfering liquids, etc.

ADVANTAGES: All the advantages of horizontal sump pump plus the convenience and safety of self-priming. Nothing in sump pit but suction pipe and float. sump and strainer, easy to clean, motor not over, sump pit, pump and motor accessible always, built for continuous operation.

SIZES: Normally supplied for 2 ft. and 5 ft. pit depths but can be used for pit depths up to 15 ft. by use of extra pipe and rod. Capacities up to 30 gals. per min. depending on head.

Write for Bulletin 635-A-1 for complete details

GOULDS PUMPS, INC.
SENECA FALLS, N. Y.
The Right Pump For Your Job

▲ Mention Item NED-4141 when writing ▲

Be sure your lubricant is free of dust, grit and chips up to the last drop by using CMD Center Point lubricant in 4 ounce tubes. Non-corrosive, it contains no lead or graphite. It gives your tools and equipment the best anti-scoring protection available.

Mail this coupon for FREE SAMPLE!
Your own test will prove it best!

CHICAGO MANUFACTURING & DISTRIBUTING CO.
Dept. 6NED, 1928 West 46th St., Chicago 9, Ill.
Without obligation, please send us a free sample of one tube of CMD Center Point Lube and one tube of CMD Center Point Oil. Also send catalog describing CMD Helical Groove Centers.
NAME.....
FIRM NAME.....
ADDRESS.....

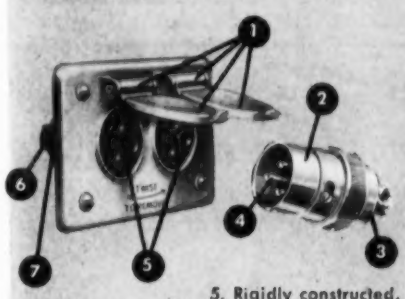
▲ Mention Item NED-4142 when writing ▲

New R&S AUTOMATIC LOCKING Midget EVER-LOK
PLUGS, RECEPTACLES & CORD CONNECTORS
FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS

10 Amp. 250 V.
15 Amp. 125 V.
A.C. or D.C.

Small size solves space problems. Typical uses: business offices, institutional buildings, industrial plants, etc. Adaptable as component for portable electrical equipment: electric machine tools, communication and sound equipment, X-ray apparatus, etc. Embody all dependable features of larger Ever-Lok units, plus advanced improvements.

1. Spring hinged, gasketed covers close receptacle when not in use.
2. Plated steel housings fully protect the contacts.
3. Adjustable Cord Grips eliminate strain on connections.
4. Contacts are precision-made, self-wiping, and self-aligning.
5. Rigidly constructed, all interiors of molded arc-resisting composition.
6. Heat-treated beryllium copper contacts and terminals . . . an advanced EVER-LOK feature.
7. Compact design provides ample capacity, yet allows for easy wiring.

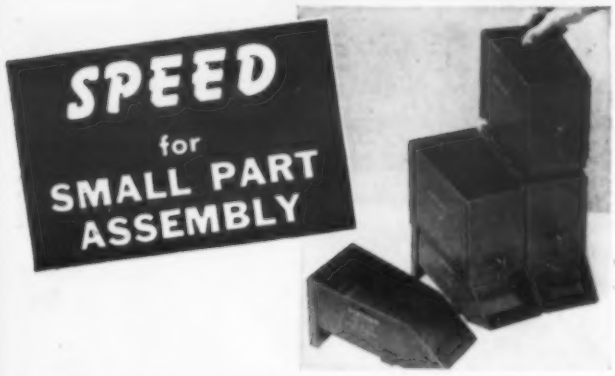


New 12-page catalog fully describes all types, dimensional drawings, ordering information, etc. Ask for catalog EL49-15.

Sold Through Electrical Wholesalers
SALES OFFICES IN PRINCIPAL CITIES

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

▲ Mention Item NED-4143 when writing ▲



Floors slope to feed parts to front—end reaching and fumbling.

Bins taper toward front to form convenient semicircle—keep all bins within easy reach.

Stacking, locking construction for rigid set-ups, easily changed when necessary.

All-welded construction. Smooth, folded edges.

New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.

Two sizes—tapered or straight sides.

IMMEDIATE DELIVERY

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corporation, 1089 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

▲ Mention Item **NED-4144** when writing ▲

Steel mill experience is typical

Steel mills save money with Shenango-Penn *Centrifugal* cast conveyor rolls because they're stronger, take more punishment, last longer! If you use symmetrical parts, sleeves, liners, rings, bushings, rolls, etc., large or small, ferrous or non-ferrous, the Shenango-Penn centrifugal process can work to *your* advantage too!

You'll not only have stronger, *pressure-dense* parts with finer grain, but you'll buy less metal, save machining time and minimize rejects.

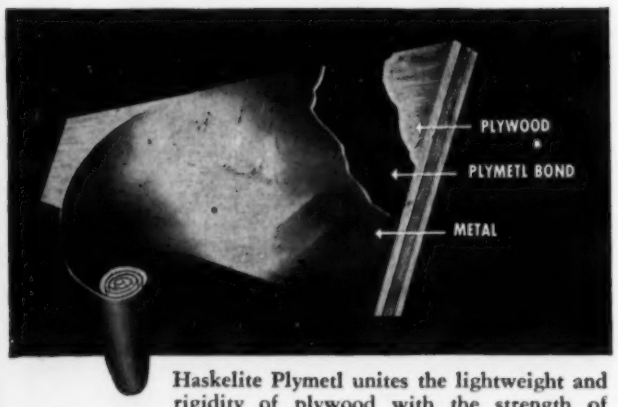
With specialized machining facilities, Shenango-Penn offers you semi or completely finished parts, as you prefer, for maximum economy. Send for free bulletins on made-to-order centrifugal castings or on centrifugally cast bronze bushing stock in standard sizes.

SHENANGO-PENN
ALL BRONZES
MONEL METAL
ALLOY IRONS

SHENANGO-PENN MOLD CO.
880 West Third St. • Dover, Ohio
Executive Offices: Pittsburgh, Pa.

▲ Mention Item **NED-4145** when writing ▲

PLAN WITH *Plymetl*
AND BUILD A BETTER PRODUCT



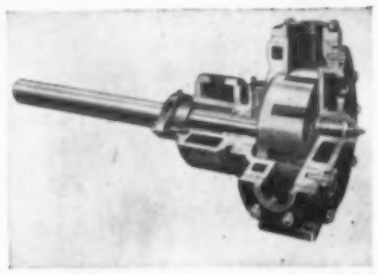
Haskelite Plymetl unites the lightweight and rigidity of plywood with the strength of metal. To one or both faces of a plywood plaque thin sheets of steel, aluminum, stainless steel, monel metal, or other metals are permanently bonded. Unaffected by moisture, mold and fungi (when edges are sealed). Plymetl is ideal for use on railway passenger car partitions, standard and refrigerator truck bodies, elevator cabs, ice cream and quick freeze cabinets, bakery proof boxes and bread coolers, etc. A 5/16" EVE Plymetl panel weighs about the same as 16 gauge steel yet has 52 times the resistance to bending. Write for complete data and samples today.

HASKELITE

HASKELITE MFG. CORP.
Dept. ED Grand Rapids 2, Mich.
New York, St. Louis, Chicago, Detroit, Los Angeles, Philadelphia. CANADA: Railway & Power Eng. Corp., Ltd.

▲ Mention Item **NED-4146** when writing ▲

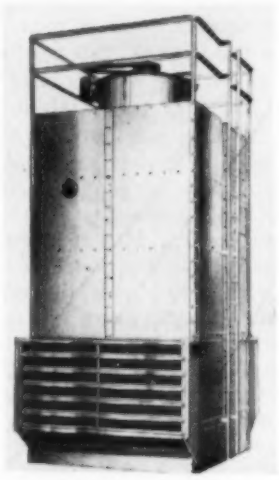
JACKETED PUMPS



Having capacities of 90, 200, 300 and 450 gallons per minute, jacketed pumps feature individual jackets for casing, head and rotor bearing sleeve. Jacket on rotor bearing sleeve makes possible heating of packing to retain its pliability and prevent liquid being handled from solidifying in packing box. Pumps incorporate Viking rotary 'gear within gear' principle and are furnished in all iron, bronze fitted or steel fitted construction. Either right or left hand port connections are available. Pump can be heated with steam for handling heavy petroleum, organic oils, greases, tar, soap solutions, molasses and other heavy viscous liquids. For handling volatile liquids for long periods, jackets can be cooled with cooling water. Made by **Viking Pump Co.**, Cedar St., Cedar Falls, Iowa.

▲ Mention Item **NED-4147** when writing ▲

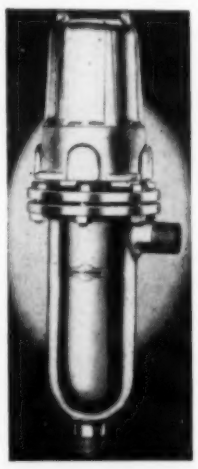
COOLING TOWER



Constructed of steel or wood, this Verflow cooling tower is easy to erect and requires little maintenance. Low pressure nozzles are used in balanced spray system. Motor and bearing housing are totally enclosed, fans of airfoil section are cast aluminum alloy, louvers are removable and frames are hinged. Nozzles are cleaned easily through access port. Complete basin fixtures are included. Corrosion-resistant paint is used on metal towers, and wood types have double-sheathed casing. Made by **Marley Co.**, 1 Marley Rd., Kansas City 15, Kans.

▲ Mention Item **NED-4148** when writing ▲

LIQUID LEVEL CONTROL



Suitable for use with wide variety of liquids of 0.55 specific gravity and upwards and for internal pressures ranging from vacuum to 600 pounds per square inch, type H liquid level control is designed for heavy-duty industrial service on control circuits, level indicating lights and alarms. Control can be obtained for higher pressures and lower specific gravity than those given, on special order. They can be supplied with standard or explosionproof cover, forged steel body, stainless steel float and noncorrosive switch unit.

Operation centers about use of magnetic proximity switches containing Alnico permanent magnet elements. Various combinations of these switches can be utilized to open and close circuits and to operate alarm systems. Made by **Magneswitch, Inc.**, 4257 S. Western Blvd., Chicago 9, Ill.

▲ Mention Item **NED-4149** when writing ▲

BELT CONVEYOR CARRIER

Ease of service is feature of this line of Sealmaster ball bearing belt conveyor carriers. Removable rollers and bearing housings are quickly replaced or interchanged without tools. Six permanently sealed, self-aligning Sealmaster ball bearing units, independent of their housings, are arranged for one-shot low pressure lubrication from either side of carrier. Hollow live shafts and ball bearings turn with rollers to reduce friction and power requirement. One-piece welded steel frames are designed to tilt in direction of belt travel and keep belt centered without guide rollers. Inverted angle base and specially designed end brackets shed material and keep rollers free.

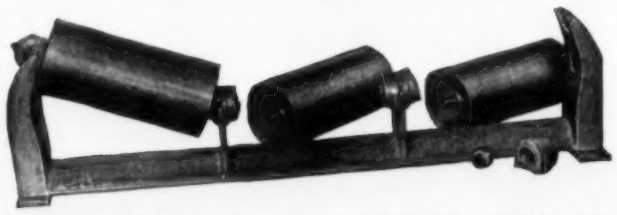
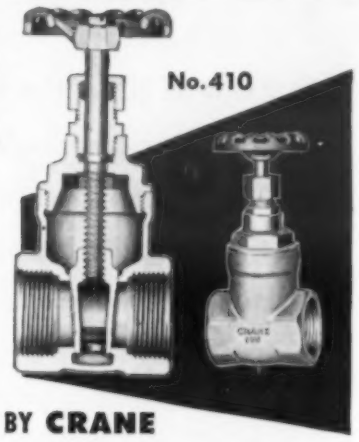


Illustration of partially disassembled carriers shows live shafts, how bearing housings slide into guides in the supporting brackets, and at right the ball bearing unit removed from one bearing housing. Made by **Stephens-Adamson Mfg. Co.**, 12 Ridgeway Ave., Aurora, Ill.

▲ Mention Item **NED-4150** when writing ▲

new look!
wide utility!



BIG VALUE

NEW 100-POUND
BRASS GATE VALVES BY CRANE
SIZES ¼ TO 2 IN.

For dependable and durable service on a wide variety of low pressure applications, Crane No. 410 brass gate valves are the best buy in their class.

All parts—body, bonnet, stem, and disc—are improved Crane design for smoother operation, more positive seating. New cylindrical body gives added strength without added weight; reinforces against operating and line stresses.

No. 410 valves with screwed ends are for working pressures up to 100 pounds saturated steam; 125 pounds water at 200 deg. F.; and 125 pounds cold oil or gas. Also available (No. 1320) with solder-joint ends. Ask your Crane Man about them or write for folder AD-1725.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

▲ Mention Item **NED-4151** when writing ▲

MATERIAL HANDLING UNITS
That Cut Down Production Costs

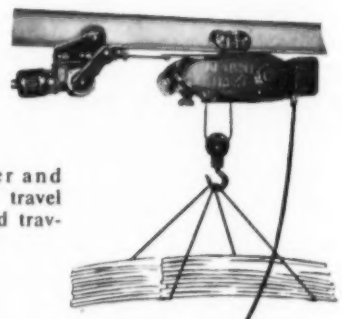


Fig. 460: The Trojan Tractor (Monorail Type) Motor Driven Pusher and Puller for speeding-up travel of hoist and other hand traveled units. *Bulletin 810*

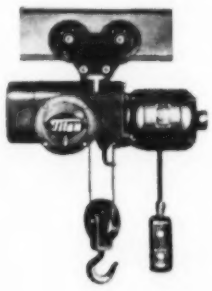


Fig. 401: The Titan Hoist 250 lbs. to 2000 lbs. The *little* hoist with *Big Hoist* design and construction. *Bulletin 801A*

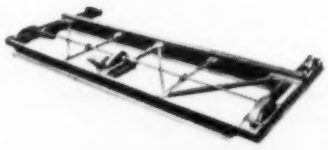


Fig. 426: Motor Traveled, Single Beam Crane. *Bulletin 695*

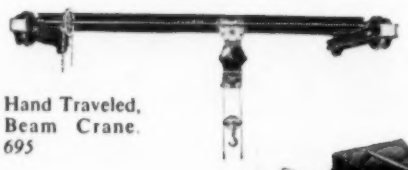


Fig. 71. Hand Traveled, Single Beam Crane. *Bulletin 695*

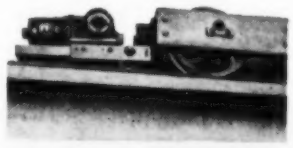


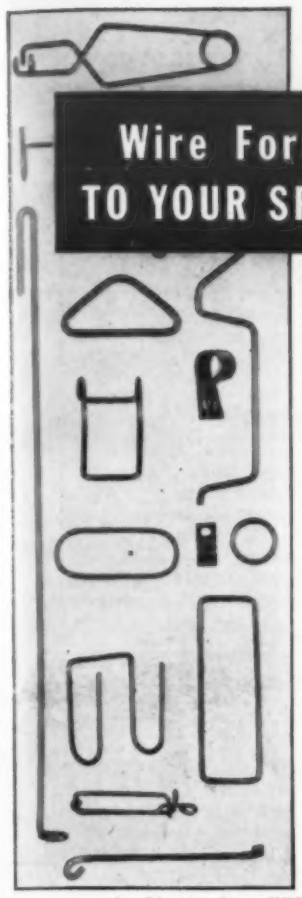
Fig. 372: Electric Winch; capacities up to 6000 lbs. on a single line. *Bulletin 668*

Fig. 470: The Trojan Tractor (Top Mounted Track Type) for power traveling existing hand cranes. *Bulletin 810*

Ask for Descriptive Bulletins and Prices

DETROIT HOIST & MACHINE CO.
8213 Morrow Street • Detroit 11, Michigan

▲ Mention Item **NED-4152** when writing ▲



Wire Forms Finished TO YOUR SPECIFICATIONS

● Now, Sommer is equipped to handle *your* wire forms—in a wide variety of attractive finishes.

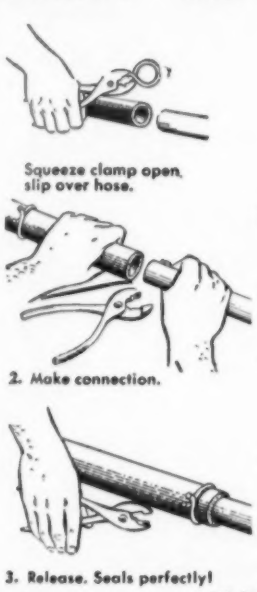
We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

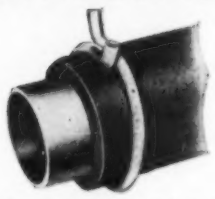
Complete forming, stamping, cut-threading and butt-welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(Formerly JESCHKE Wire and Specialty Company)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ Mention Item NED-4153 when writing ▲

EASY TO ASSEMBLE!





NEW HOSE CLAMP
"tightens itself"

- **EASILY INSTALLED** One-piece construction—no screws or gadgets to adjust.
- **SCIENTIFICALLY DIMENSIONED** Insures complete circular, tight permanent seal. Spring tension enables clamp to expand and contract with temperature changes.
- **SAVES HOSE** No sharp edges to gouge hose and cause breaks and leaks.
- **COSTS LESS** Initial purchase, installation, long-life save you money.

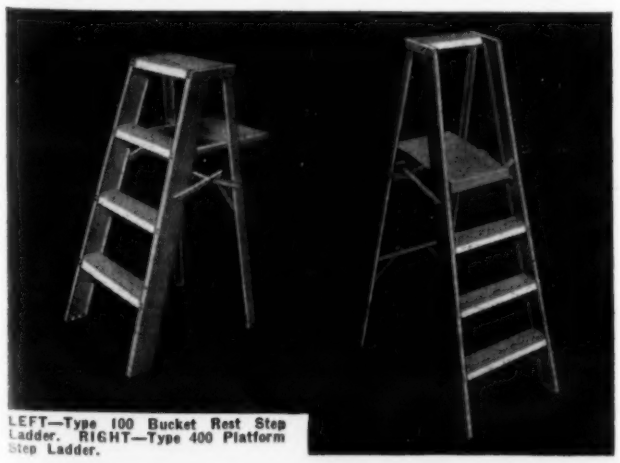
Write for bulletins

CORBIN SCREW DIVISION
The American Hardware Corporation
NEW BRITAIN, CONNECTICUT

CORBIN *Self-Tightening HOSE CLAMPS*

▲ Mention Item NED-4154 when writing ▲

ORIGINAL ALUMINUM LADDERS



LEFT—Type 100 Bucket Rest Step Ladder. RIGHT—Type 400 Platform Step Ladder.

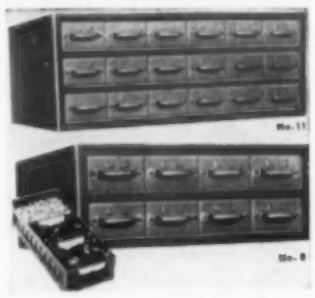
STEP LADDERS ● EXTENSION LADDERS
WAREHOUSE LADDERS ● WALL LADDERS
FIRE LADDERS ● SHELF LADDERS

ORIGINAL MANUFACTURERS OF ALUMINUM LADDERS

Aluminum Ladder Company
346 Carbis Street
Worthington, Pa.

▲ Mention Item NED-4155 when writing ▲

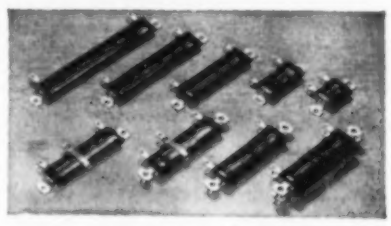
STEEL DRAWER CABINETS



Providing handy storage space for small parts, Equipto steel drawer cabinets feature unit welded steel frame and adjustable cross dividers on 1-inch centers. Lengthwise dividers can be added or removed, and label holders are furnished on every drawer and divider. Drawer size is 11⅞ x 5⅜ x 3⅛ inches. Available in two sizes with 8 or 18 drawers and 24 or 72 adjustable compartments, respectively, cabinets are finished in green enamel. Made by **Aurora Equipment Co.**, Equipto Div., Aurora, Ill.

▲ Mention Item NED-4156 when writing ▲

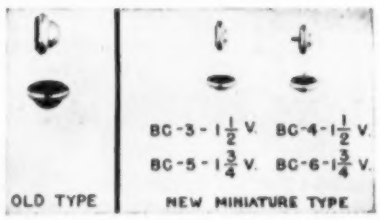
THIN-TYPE RESISTORS



Available in five wattage ratings and in lengths which vary from 1¼ inches for 30-watt size to 6 inches for 75-watt size, wire-wound vitreous-enameled thin-type resistors 1 inch wide and ¼-inch thick are particularly useful when space is limited. They are equipped with either single-unit mounting bracket which allows resistor to be mounted close to mounting surface or with stud bracket which provides also for stacking of two or more units. Brackets which extend entire length of resistor core spread developed heat evenly throughout resistor and quickly conduct it to air and mounting surfaces. Resistors, with either type of bracket, are made as fixed or adjustable lug units with which odd resistances can be obtained easily. Made by **Ohmite Mfg. Co.**, 4835 Flournoy St., Chicago, Ill.

▲ Mention Item NED-4157 when writing ▲

MINIATURE TYPE CELL



Capable of providing constant potential for bias of electronic tubes and circuits where no current is required of cell, miniature type Grid Bias Cells are applicable to circuits and devices such as hearing aids, first audio stage of radio receivers, high gain stages of voltage amplifiers and miscellaneous electronic amplifiers. Cell is available at either 1.5 or 1.75 volts; but since it is potential device only, its electromotive force is lowered by even fraction of microampere drain. However, it is unaffected by alternating current of any frequency. At audio frequencies, cells have nonreactive impedance of between 250 and 1500 ohms. Satisfactory operations can be had over range of from −60° to 60° C. Made by **P. R. Mallory & Co.**, 3027 E. Washington St., Indianapolis 6, Ind.

▲ Mention Item NED-4158 when writing ▲

zoo "Self-Wind" HEAVY DUTY ELECTRIC CORD REEL

NEW!

● MOUNTS ON WALL OR CEILING

Mount one or more of these brand new reels on the wall or ceiling of your shop, so your workmen can get the light they need — when and where they want it. Plugs in anywhere. Universal mounting bracket swings reel through 180°. Trigger lock holds cord when withdrawn. Simple, safe, sturdy—a low-cost way to improve working conditions and help increase production. In 25 and 45 ft. cord lengths, at your jobber's or write direct.

AERO-MOTIVE MFG. CO.
1803 ALCOTT ST. KALAMAZOO 24, MICHIGAN

▲ Mention Item NED-4159 when writing ▲

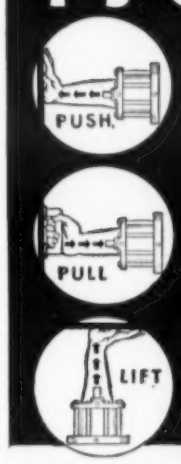
Only Noark Starters have floating ball-bearing action

A FEATHERLIGHT TOUCH pushes up that moving unit. Noark Starters have free action, longer life, freedom from troubles. Turn of a knob gives automatic or manual reset . . . Order Noark Motor Starters from your Federal Distributor . . . write us for "Federalog" and "Simplified Motor Control." Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

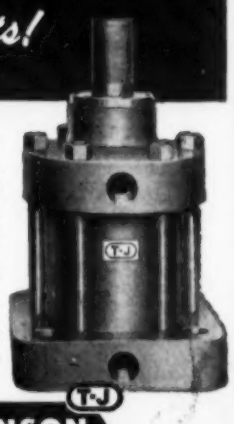
FEDERAL NOARK MOTOR STARTER
SALES OFFICES IN PRINCIPAL CITIES

▲ Mention Item NED-4160 when writing ▲

T-J CYLINDERS



Save Labor!
Speed Production!
Cut Costs!



T-J Air and Hydraulic Cylinders are built for 1001 tough jobs in industry . . . where pushing, pulling or lifting is needed . . . 100 lb. or 50,000 lb. Available in many standard sizes and styles . . . both cushioned and non-cushioned types. Backed by 32 years' experience . . . built for long-life dependability. Write for latest catalogs. The Tomkins-Johnson Co., Jackson, Michigan.

TOMKINS-JOHNSON
RIVETORS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

▲ Mention Item NED-4161 when writing ▲

Tempilstiks°

the amazing Crayons that tell temperatures

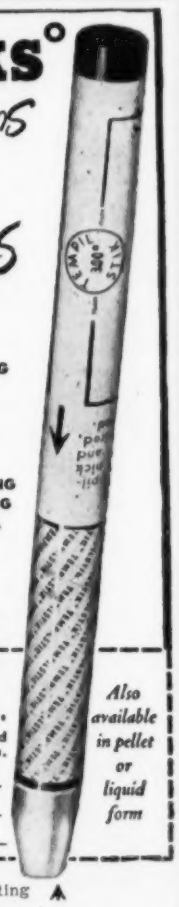
in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

It's this simple: SELECT the Tempilstik° for the working temperature you want. MARK your workpiece with it. WHEN the Tempilstik° mark melts, the specified temperature has been reached.

available in these temperatures (°F)
125°, 138°, 150°, 163°, 175°, and so on to 400°F
400°, 450°, 500°, 550°, 600°, and so on to 1600°F

gives up to 2000 readings

$2 each



Also available in pellet or liquid form

TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy"—16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

▲ Mention Item NED-4162 when writing ▲

TOPS ON SPEED

IN HANDLING COIL STOCK

Automatic centering and balancing of coil stock is done with speed, ease and saving of material with LITTELL Automatic Centering Reels. Plain and motor driven types. Capacities, 800 to 6,000 lbs. Coil Cradles for coils up to 20,000 lbs.

Other Littell press-room equipment includes: Roll and Dial Feeds, Power Straighteners, Scrap Winders, Air-Blast Valve. Vacuum and Mechanical Pickers.

Littell Reels center and balance coil stock. Ball bearings. Adjustable brake and bars. With loading lever, one man can load coils up to 300 lbs.

F. J. LITTELL MACHINE CO.
4161 Ravenswood Ave.
Chicago 13, Ill.

REQUEST BULLETINS

SPEED WITH SAFETY

LITTELL REELS

Mention Item NED-4164 when writing

the only paint spray that gives you { 1 HORSEPOWER PERFORMANCE AT 1/3 HORSEPOWER COST

Binks new DP portable spray painting unit is made to standards hitherto unknown for equipment of this type. This rugged ½ h.p. direct-drive piston type compressor actually gives continuous 1 h.p. spray painting performance and efficiency. It produces a smooth, pulseless flow of air at 40 pounds pressure in ample volume to operate Binks standard spray guns.

There are no exposed moving parts . . . you can pick up the DP unit safely while it is running. The handle, which is also the air intake and filter, is always cool. The DP won't "creep" when operating. Weighs only 47 pounds . . . you can carry it anywhere, use it anywhere, for any kind of maintenance painting or products finishing.

*Direct-drive piston

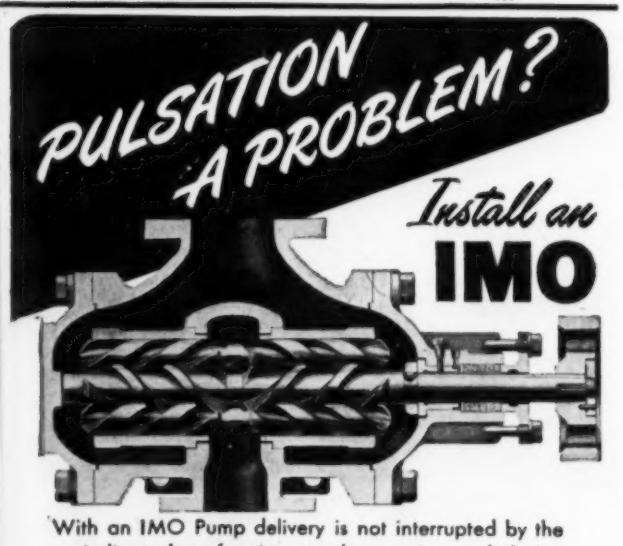
Write today for descriptive Bulletin 600 and prices of this new unit.

Binks MANUFACTURING COMPANY
3122-34 West Carroll Avenue, Chicago 12, Illinois

Mention Item NED-4165 when writing

PULSATION A PROBLEM?

Install an **IMO**



With an IMO Pump delivery is not interrupted by the periodic strokes of a piston or the opening and closing of valves and ports. The turning of the rotors in an IMO forces the fluid from suction to discharge in a continuous, uniform flow.

IMO pumps can be furnished for practically any capacity and pressure required for oil, hydraulic-control fluids and other liquids.

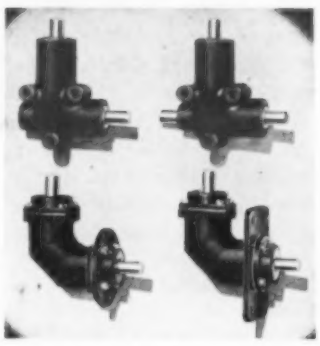
Send for Bulletin I-145. W

IMO means I MOVE OIL

IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

Mention Item NED-4166 when writing

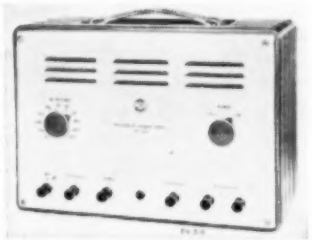
GEARED ANGLE DRIVES



Suitable for use in either manual or power operated systems, ANGLgear units are right-angle gear drives. They are available in standard 1:1 ratio in heavy duty circular or rectangular flange mounted right-angle types and in medium duty three-hole mounted right angle or T-types. Heavy duty models are rated 500 inch-pounds and medium duty 250 inch-pounds ultimate static load. Design features include hardened gear teeth, antifriction bearings, integral cadmium-plated heat-treated or stainless tubular shafts, aluminum alloy housings, grease-retaining seals and precision machining. To suit user's need, designs can be varied or modified. Made by **Airborne Accessories Corp.**, 25a Montgomery St., Hillside 5, N. J.

Mention Item NED-4167 when writing

POWER SUPPLY

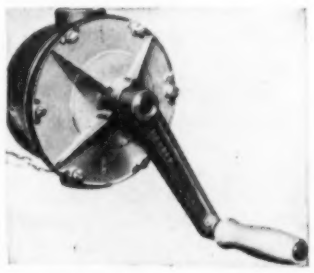


Suitable for use on factory production lines and for designers of electronic circuits and devices, WP-23A regulated power supply provides highly filtered direct current power at voltage which is continuously adjustable from 0 to 300 volts. Voltage remains virtually constant regardless of line-voltage fluctuations and varying load currents encountered in development work.

Primarily intended as stable B supply, unit is useful also as low-impedance C bias source. Both output terminals can operate above ground potential, as required, and are insulated from case to permit grounding of either positive or negative terminal. For permanent industrial applications, WS-18A panel adapter in form of all-metal frame is available as accessory to permit mounting of instrument into standard 19-inch relay rack. Made by **Radio Corp. of America**, RCA Victor Div., Camden, N. J.

Mention Item NED-4168 when writing

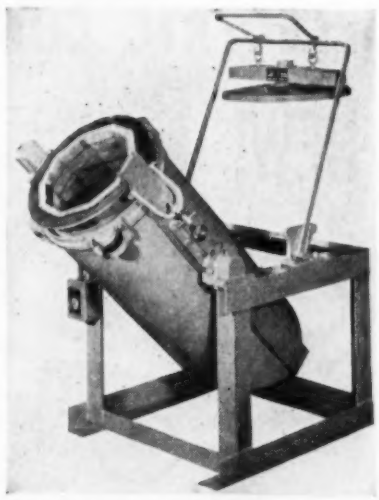
HAND PUMPS



Having capacity of 10 gallons per 120 revolutions, Utility Master hand-operated barrel-type pump is portable unit which can be used for pumping oil, gasoline, kerosene, toluene and similar liquids. Cranking can be as slow as 30 revolutions per minute. Inlet and outlet ports are 1-inch tapered pipe thread. Unit will pump up to 20-foot head depending upon volatility of liquid. Various accessories for pumping from barrels which can be obtained include foot valve, hose and nozzle, refueling spout for filling vessels without hose and combination-size bung adapter. Made by **Lear, Inc.**, Romec Pump Div., 1440 Abbe Rd., Elyria, O.

Mention Item NED-4169 when writing

BURNISHING BARREL



Redesigned Nos. 1 and 2 Mercil burnishing barrels are supplied with reducer type direct-connected drive and motor for quieter and more efficient operation. Three roller bearings in supporting ring have been placed under barrel at forward end to aid in alignment and serve to distribute weight of load over entire barrel. Internal gear is fastened to bottom of barrel from outside so that wood lining blocks need not be removed when gear or shaft change is necessary. Other improvements include petcock on cover to allow gas to escape, larger flange at top of barrel, larger base casting and main shaft, opening in shield covering grease cups, thicker barrel bottom, better seal between barrel and cover, improved balance, Alemite fittings, neoprene covered cable, and totally enclosed ball bearing type motors. Made by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

Mention Item NED-4170 when writing

Out in Front

Kester "RESIN-FIVE" Core Solder

Now, a new flux for cored solder. Kester's "Resin-Five" is more active . . . more efficient . . . more stable than any rosin flux and yet is *non-corrosive-non-conductive.* For complete information contact Kester's Technical Department.

WRITE FOR FREE MANUAL
Kester's new 28-page technical manual, "SOLDER and Soldering Technique."

1899 50th Anniversary 1949

KESTER SOLDER COMPANY
4201 Wrightwood Ave., Chicago 39, Illinois

Factories Also At
Newark, New Jersey • Brantford, Canada

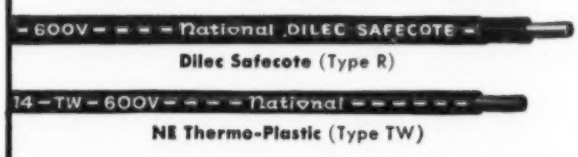
KESTER SOLDER

Mention Item NED-4171 when writing

There's a NATIONAL ELECTRIC Flexible Wiring System

for every housing job

2 TYPES OF NE BUILDING WIRE

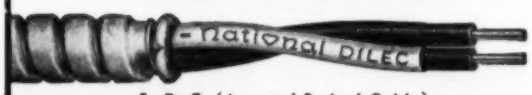


Dilec Safecote (Type R)

NE Thermo-Plastic (Type TW)

2 TYPES OF GALVANIZED, FLEXIBLE-STEEL ARMOR PROTECTION

Flexsteel—Flexible Steel Conduit



A. B. C. (Armored Bushed Cable)

2 TYPES OF NON-METALLIC SHEATHED CABLE

Canvas-Back Loomwire—A new, small diameter cable that eliminates paper stripping

NE-O-PRENE Loomwire—The *first* Neoprene-Sheathed Loomwire to be listed by Underwriters' Laboratories, Inc.

NATIONAL ELECTRIC PRODUCTS NE WIRING SYSTEMS WIRES AND CABLES

Complete Lines of Accessories for all wiring systems: Boxes, connectors, lugs and fittings.

Sold through leading electrical wholesalers. Listed by Underwriters' Laboratories, Inc.

National Electric PRODUCTS CORPORATION

1353 CHAMBER OF COMMERCE BUILDING, PITTSBURGH 19, PA.

Mention Item NED-4172 when writing

Albion QUALITY CASTERS

"THE BEST FOR LESS"

for every Industrial use

LIGHT—MEDIUM—HEAVY DUTY

— IMMEDIATE DELIVERY —

With Pat-Pend. Work-hardened, Rolled-in Ball Race, From 3" up to 12" Diameter Wheels. Available also are Trailer Truck, Stem Type, and Grooved "V" Wheel Casters.

ALL ALBION QUALITY CASTERS ARE AVAILABLE WITH PLASTIC, SEMI-STEEL, SOLID RUBBER AND MOLDON RUBBER WHEELS.

SEND FOR YOUR FREE CATALOGUE AND PRICE LIST TODAY.

ALBION INDUSTRIES, INCORPORATED
ALBION, MICHIGAN
Sales Offices in Principal Cities

▲ Mention Item NED-4173 when writing ▲

Standard X WASHERS

PRESS ON . . .
quick, positive assembly.

CLAMP SHUT . . .
360° closure supports greater thrust loads.

OPEN . . . PULL OFF . . .
fast, easy removal simplifies service and repair.

Available for pin diameters—7/32" to 17/32".
Write for Bulletin 26.

Standard

LOCKNUT & LOCKWASHER, INC.
118 W. ST. CLAIR ST., INDIANAPOLIS 4, INDIANA

▲ Mention Item NED-4174 when writing ▲

MULTIPLE DRILLING with a MULTI-DRILL

INCREASES CAPACITY **UP TO 800%**

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as ½"—handle drill sizes up to ⅜" in steel. Special adaptations available.

There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

COMMANDER MFG. CO.
4220 WEST KINZIE ST., CHICAGO 24, ILL.

Product of *Commander* — Builder of the *Commander Tapper*

▲ Mention Item NED-4175 when writing ▲

RECTIFIER

Applicable to automotive, aircraft, marine and industrial fields, this rectifier will supply direct current for production or laboratory testing of direct-current motors, solenoids, ignition systems and other electrical components. Consistently uniform test conditions are obtained by automatic voltage control which holds direct-current voltage at preset value regardless of line voltage fluctuations or variations in direct-current load. Selenium rectifiers provide long life with minimum of maintenance. Rectification is of three-phase full-wave type providing smooth output voltage wave shape without need for filtering.

Unit shown operates from 220-volt alternating current and delivers 100 amperes direct current. Its output voltage can be set and maintained within 0.05-volt anywhere between 0 and 8 volts direct current. Made by **Mellaphone Electronic Rectifier Co.**, Box 395, Rochester 2, N. Y.

▲ Mention Item NED-4176 when writing ▲

QUICK-OPENING DIE HEAD

Utilizing monotype high speed steel chasers, quick-opening die heads can be used on any pipe threading machine having capacity to 2-inch pipe diameter to facilitate threading pipes, bolts and solid rounds. Suitable adapters are furnished with die heads so that they can be mounted either vertically or horizontally on machine carriages. Since sets are interchangeable on individual machines, it is practical to use different die heads for various pipe and bolt diameters. Operator merely selects die head required for job and inserts it in position in carriage and cuts desired thread.

When in place, die head is opened quickly by means of hand operated toggle clamp. This permits rapid removal of stock after threading. Closing clamp brings chasers to accurate and positive cutting position. Cast-iron die head components provide ample backing metal for hardened steel chasers to prevent chatter and insure clean threads on pipes as well as bolts and solid rounds. Monotype chasers are held in place by hold down plates and stop screws, can be reground easily and replaced rapidly. Made by **Peerless Machine Co.**, Dept. N, 1600 Junction Ave., Racine, Wis.

▲ Mention Item NED-4177 when writing ▲

The FIVE BRIGHTEST STARS in the MAGNETIC TAPE RECORDING FIELD!

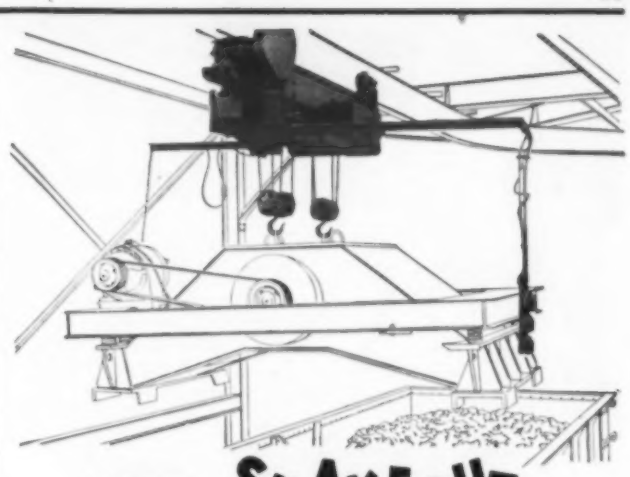
What TWIN-TRAX* Recording is:
Not one, but TWO independent, isolated sound tracks recorded on standard reels of ¼" wide magnetic tape—that's the revolutionary new idea behind TWIN-TRAX. One track records during forward tape travel, the second during reverse. Automatic instantaneous reverse action assures continuous flow of program material, eliminates necessity for rewinding. Result: DOUBLED playing time—no loss in frequency response or quality—and best of all, your tape costs are cut in HALF!

Partial List of TWIN-TRAX* Features:
One hour of continuous play. Frequency response 50 to 9000 cycles ±3 db. Individual bass and treble controls. Simplified tape threading. Low hum level (DC on heaters). No mechanical noises. Instantaneous reverse control — without unthreading tape! Instantaneous stop — no slurring. High speed forward and reverse shuttle without unthreading. Complete elimination of capstan tape slippage. 3.2 and 500/600 ohm balanced line outputs. Twin electronic erase heads. Flutter and wow ±0.1%. No belts to loosen or pulleys to slip.

Write TODAY for Descriptive Literature! *Registered Trademark

AMPLIFIER CORP. OF AMERICA
398-15 Broadway New York 13, N. Y.

▲ Mention Item NED-4178 when writing ▲



FASTER SHAKEOUT

. . . with R & M hoist

Robbins & Myers Twin-Hook Hoists on the Robins Car Shakeout give a double lift to speed and efficiency of car unloading. Adaptable, sturdily-constructed hoists add to life of all your equipment.

Blocks are reeved with two independent steel cables; either will hold weight of the shakeout unit. Push-button control provides independent operation of the hoist and shakeout from a single station. Speed up to 16 F.P.M. (60 cycle) on lifts to 25 ft.

R & M Hoists are available in capacities from 250 to 20,000 pounds. Write for particulars.

ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD 96, OHIO

▲ Mention Item NED-4179 when writing ▲

JUST OUT!

YOU NEED IT!

IT'S FREE!

WRITE TODAY!

New 36-page "Fiberglas* Glass-base Electrical Insulating Materials" manual is just off the press. Contains performance charts, graphs, photographs and descriptive material on the complete line, including: Tape, Varnished Cloth, Saturated Sleeving, Cloth, Laminates, Mica Combinations and Wire and Cable Insulations.

If you manufacture, design, use, repair or sell electrical equipment you need this new manual. Features selection factors—suggested uses—and other pertinent information that will help you determine the best Fiberglas-base material for a specific job.

This booklet, describing the unique combination of characteristics of Fiberglas-base materials, is *free*.

See why the use of this inorganic-base insulating material is increasing so rapidly—why so many designers, manufacturers and repair shop operators specify it. Write for your copy today: Owens-Corning Fiberglas Corporation, Textile Products Division, Dept. 921, 16 E. 56th Street, New York 22, N. Y. In Canada: Fiberglas Canada Ltd., Toronto, Ontario.

OWENS-CORNING **FIBERGLAS** — ELECTRICAL INSULATING MATERIALS

*Fiberglas is the trade-mark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

▲ Mention Item NED-4180 when writing ▲

Does the work from two to five times faster than hand threading. Price in U. S. A.

$160.00

(no legs, vise or pipe tool included)

OSTER No. 422 POWER VISE STAND

Powered with a 1/2 H.P. universal, reversible, variable speed motor for light socket operation, this portable machine converts hand pipe tools to power tools. Standard range is 1/8" to 2" pipe. Equipped with special, universal drive shaft, the machine has ample power to drive geared receding die-stocks from 2 1/2" to 6" capacity. For complete details about this modern time-saving machine, write for Catalog No. 22-A.

THE OSTER MANUFACTURING COMPANY
2066 East 61st Street Cleveland 3, Ohio, U.S.A.

OSTER PIPE THREADING HEADQUARTERS

▲ Mention Item NED-4181 when writing ▲

1 hour service ...or 300 The answer is BORIUM NOZZLES for all blast cleaning requirements

BORIUM INSERTS are surrounded by a mild steel shell to absorb shock. The super-hard insert prevents rapid cut-outs, multiplies life and prolongs original efficiency.

BORIUM is pure tungsten carbide. No other commercial metal approaches it in hardness or wear resistance.

Cast as special inserts for blast cleaning nozzles, it lasts from 300 to 600 times longer than the average cast iron nozzle, resists cut-outs, maintains velocity and pattern, saves compressed air.

You can obtain special BORIUM NOZZLES of your own design by sending blueprints for quotation. Maximum limitation of inserts is 3"x1½". Standard screw and flange type BORIUM NOZZLES are carried in stock. *Write for literature.*

STOODY COMPANY
1163 West Slauson Avenue, Whittier, California

▲ Mention Item NED-4182 when writing ▲

They couldn't break this pony!

To test the EASY-FLO brazed king-pin axle assembly, they drove this pony tractor full tilt over a rough field—and suddenly swung the front wheels hard. When no breakage occurred after many tests, they concluded the assembly had all the strength it would ever need. Time has proved it. Like thousands of other manufacturers they learned that—

Assembly was designed for EASY-FLO brazed construction to save making the large forging, die costs and machinery otherwise required. Brazing time per assembly is 1 minute flat.

EASY-FLO

BRAZED JOINTS HAVE ONE-PIECE STRENGTH

Innumerable tensile, bend and pressure tests have established this fact—joints properly made with EASY-FLO low-temperature silver alloy brazing are as strong as the parent metals—in most cases, stronger. They'll take any punishment the metals themselves will stand.

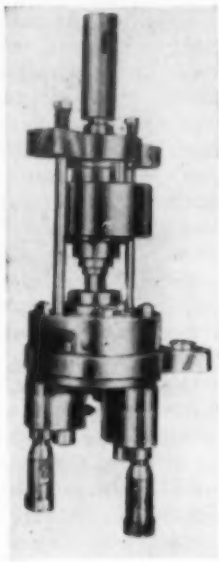
BULLETINS 12-A and 15

will tell you why EASY-FLO brazed construction is so strong and how it brings costs 'way down. Write for copies today.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.
Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

▲ Mention Item NED-4183 when writing ▲

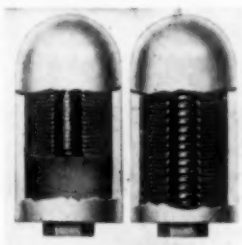
ADJUSTABLE TAPPING HEAD



Wide range of adjustment without overhang is feature of this Errington adjustable tapping head. It is fully geared with needle bearings on all spindles in heads and ball thrust bearings throughout. All parts are fully enclosed for pressure lubrication and protection. Case is sand-cast aluminum, and there is nonslip positive clamping on all adjusting members. Unit is supplied with three spindles for equal adjustment in line and three, four, five or six spindles for equal adjustment on bolt circles. This adjustable tapping head is designed for use on most standard drill presses and can be attached quickly. Set-up for any desired pattern is accomplished readily. Made by **Errington Mechanical Laboratory, Inc.,** Staten Island 4, N. Y.

▲ Mention Item NED-4184 when writing ▲

WATER HAMMER ARRESTOR



Because it provides air cushion to absorb water hammer pressure impulse, ShokStop water hammer arrestor prevents damaging effects from this force in many industrial and domestic applications. It consists of permanently sealed air chamber with fabricated metal bellows which allow free contraction and expansion of air sealed within but prevent all contact between air and water to eliminate water logging of chamber. Unit is easy to install and requires little or no maintenance. Made by **Wade Mfg. Co.,** Elgin, Ill.

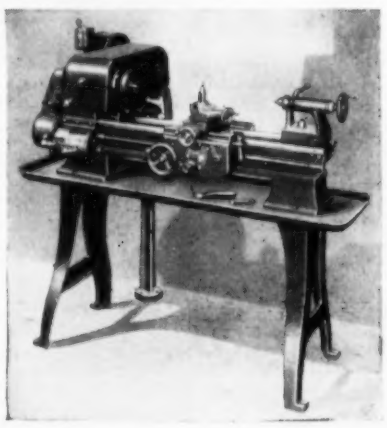
▲ Mention Item NED-4185 when writing ▲

RIDING TYPE POWER TRUCK

Designed for fatigue saving on long hauls around large plants and where truck is in constant operation, this riding type Jacklift power model truck is available in platform, pallet and tractor styles. Handle is long and curved for operation from either riding or walking position. Controls can be operated with handle in any position. Truck is equipped with 'dead-man' type electric brake and has flexible electrical connections between battery and drive motor. Drive unit can be changed in approximately 20 minutes. Made by **Lewis-Shepard Products Inc.,** 302 Walnut St., Watertown 72, Mass.

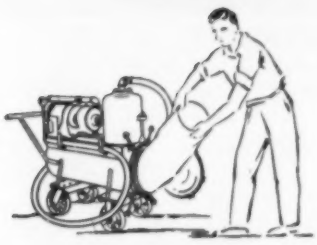
▲ Mention Item NED-4186 when writing ▲

ELEVEN-INCH LATHE



With 1-inch collet capacity for draw-in collets and center distances of 24 and 36 inches, 11-inch swing lathe has greater capacity than previous models as well as heavier construction. Preloaded ball bearing spindle mounting assures sustained accuracy at all spindle speeds of this machine from 45 to 1500 revolutions per minute without bearing adjustment. Total spindle runout is held to within 0.0005-inch 12 inches from bearing, and two V-ways and two flat ways of bed are precision ground to tolerance of 0.0005-inch along lineal capacity of lathe. At points where bearings are not ordinarily used, self-lubricating bronze bearings protect against wear. Instant selection of 48 threads and feeds is provided by quick change gear equipment. Moderately priced, this lathe is available in cabinet and bench types as well as conventional floor type. Made by **Logan Engineering Co.,** 4904 W. Lawrence Ave., Chicago 30, Ill.

▲ Mention Item NED-4187 when writing ▲

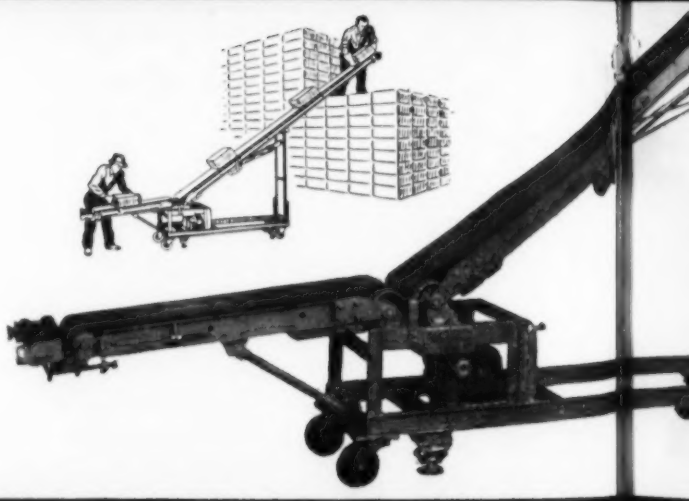


Place both hose machine the switch and Mobile Mob Filter draws off ant, passe filtering chamber. Chi dge, abra and unwanted contam on remai the clean coolant is re d to the

When filter bag is full, merely remove bag, dump sludge, abrasives. The Mobile Coolant Filter, a one-man operation, can efficiently handle a few or a battery of machine tools. For more information write to 405 Wabash Avenue, Lebanon, Indiana, in care of Honan-Crane Corporation, a subsidiary of Houdaille-Hershey Corp.

▲ Mention Item NED when w

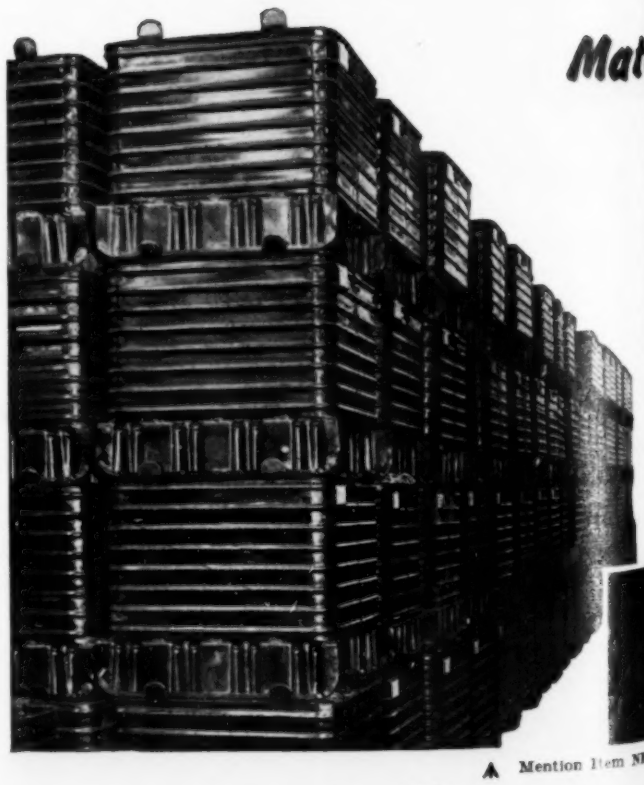
MATHEWS
REVERSIBLE, PORTABLE BE CO
12′ 16′ 19′ LONG — 12" and " BE
COMPLETE, READY TO OPERATE WITH PO ER RE
SECTION AND ALL ELECTRICAL EQ MENT



AVAILABLE ON A NATIONAL BASIS T OUGH

▲ Mention Item NED when w

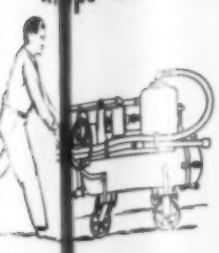
STRETCH



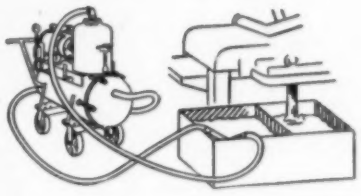
▲ Mention Item NED

Mobile Coolant Filter

keeps coolants, oils, sumps clean without DOWN-TIME



New Houdaille Mobile Coolant Filter provides coolant - cutting oil clarification without "downing" metal-working machines and cleaning sumps as production continues. Merely wheel the easy-to-handle mobile unit to machine sump whenever filtration is necessary, whole operation takes about 10 minutes.



both hose machine sump, press ...ith and Houdaille Mobile Coolant ...rows off ...ant, passes it through ...ber. Chip ...dge, abrasives, scale ...d contam ...ion remain in filter— ...lant is re ...d to the sump.

CLEAN OIL ENGINEERING

Item NED ... when writing

NEWS

E BE... CONVEYER

... and ..." BELT WIDTH

WITH PO...ER RECEIVE ...CAL EQU...MENT

WRITE TODAY FOR COMPLETE INFORMATION

SAFELY, EASILY ADJUSTABLE by ONE PERSON

MATHEWS CONVEYER COMPANY

ELLWOOD CITY, PENNA.
PORT HOPE, ONTARIO
SAN CARLOS, CALIFORNIA

...ASIS T...OUGH AUTHORIZED DISTRIBUTORS

...n Item NE... when writing

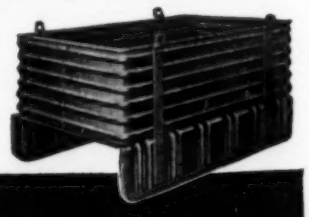
H... STORAGE SPACE

...with UNION METAL

...Materials Handling Equipment

UNION Metal Steel Tiering Skid Boxes often come to the rescue when storage space is at a premium. They do the trick because they're *engineered* for close, compact grouping and for fast, easy, *safe* tiering from floor to roof.

You'll find these same advantages apply to Union Metal Skid platforms and pallets. In other words, they're designed to save you money. So be sure to check with The Union Metal Manufacturing Company (Canton 5, Ohio) for top results in handling materials.



UNION METAL
...terials Handling Equipment

...ion Item NE... when writing

SLIDING SHELF BINS

Providing flexibility and ease of handling and storing of parts, tool room supplies and similar items, this parts bin has sliding shelves which require no bolts for construction and adjustment. Shelving can be readjusted with bin standing in place. Nut and bolt type bins can be converted to sliding shelf bins by replacing sheet steel uprights on right and left sides of bin. Made by **Hope Metal Products, Inc.,** 1511 Rockwell Ave., Cleveland 14, Ohio.

▲ Mention Item NED-4191 when writing ▲

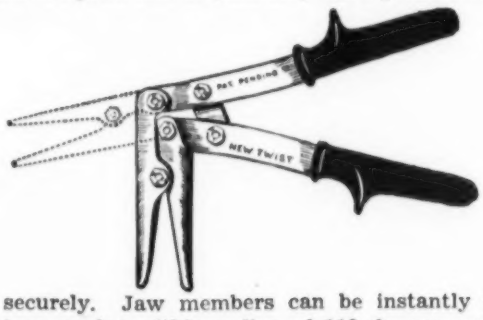
OIL PILOT VALVES

Obtainable in four standard mountings including pipe line, base, foot and panel, series 7000 oil pilot valves can be used for remote control of oil-pressure-operated four-way hydraulic valves. Operational control is gained by fork lever design which, when actuated by moving part of device being powered, permits remote reversing of main valve. Both fork lever and fork and hand lever types can be supplied; latter permits manual interruption of cylinder's forward or return stroke at any time. Valves can be supplied with all ports blocked in neutral, all ports open to exhaust in neutral, and cylinder ports open to exhaust and pressure port blocked in neutral. Made by **Gerotor May Corp.,** Dept. K, P. O. Box 86, Baltimore 3, Md.

▲ Mention Item NED-4192 when writing ▲

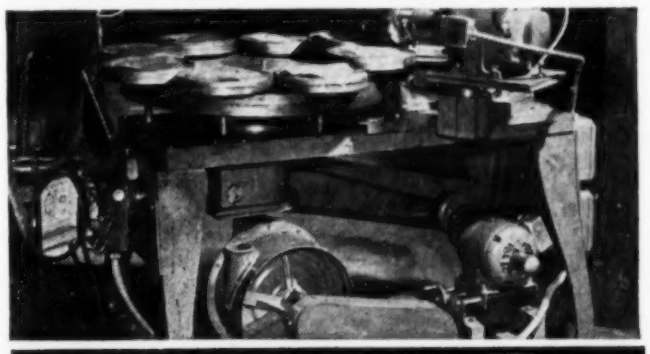
FLEXIBLE JAW PLIERS

Practical for assembly jobs where parts or wires must be reached or placed in confined spaces, New Twist pliers have flexible jaws and require only light pressure to hold



parts securely. Jaw members can be instantly shifted to various angles within radius of 110 degrees and used in that position. Jaws and handles are heat-treated chrome molybdenum steel, and handles are rubber covered. Length overall is 10¾ inches, and weight is 8½ ounces. Made by **Industrial Products Co.,** 2807 N. Fourth St., Philadelphia 33, Pa.

▲ Mention Item NED-4193 when writing ▲



HOLDING RUBBER PATCHES WITH VACUUM

When these rubber patches pass under the motor driven wire brushes, they are held flat and firmly by the Spencer vacuum producer shown underneath the machine. This is another automatic use of built-in vacuum.

Spencer equipment is also used to clean and deflate rubber goods and to furnish air pressures up to 10 lbs. for testing rubber boats, inner tubes and other rubber products. Spencer Vacuum removes large quantities of talc from floors, walls, ceilings and machinery in rubber plants. 356-V

150 USES FOR VACUUM...ASK FOR BULLETIN

SPENCER VACUUM CLEANING
HARTFORD

THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

▲ Mention Item NED-4194 when writing ▲

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 5 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$29.90**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 5731 Armitage Ave. • Chicago 39, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ Mention Item NED-4195 when writing ▲

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY | Established 1914

Manufacturers of Self-Sticking Tape Products

Chippewa Falls 5, Wis. • *Distributors in 125 Cities*

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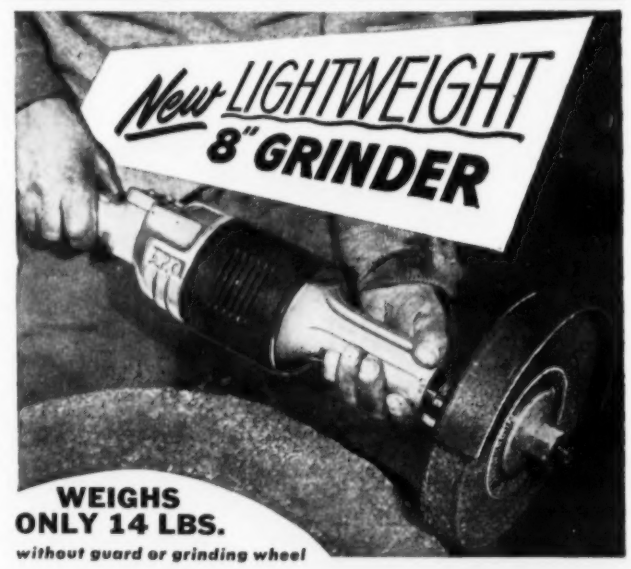

WEIGHS ONLY 14 LBS.
without guard or grinding wheel

SAVES LABOR...less fatigue!
SAVES TIME...greater cutting power
CUTS GRINDING COSTS

ARO AIR TOOLS

Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

Straight or spade handle models. Speeds, 4200 to 6000 RPM for 6" and 8" grinding wheels, radial wire brushes or cup wire brushes.

Send for bulletin. See your nearest industrial distributor . . . The Aro Equipment Corp., Bryan, Ohio.

▲ Mention Item NED-4197 when writing ▲

Are your segmental wheels lasting long enough? Time and time again, Robertson Cool-Cut Segments or Ring Wheels have proved their ability not only to cut faster and cooler, but to give longer wheel life. Let a Robertson engineer show you; write on your business letterhead for a demonstration.

ROBERTSON
MANUFACTURING COMPANY
TRENTON 5, NEW JERSEY

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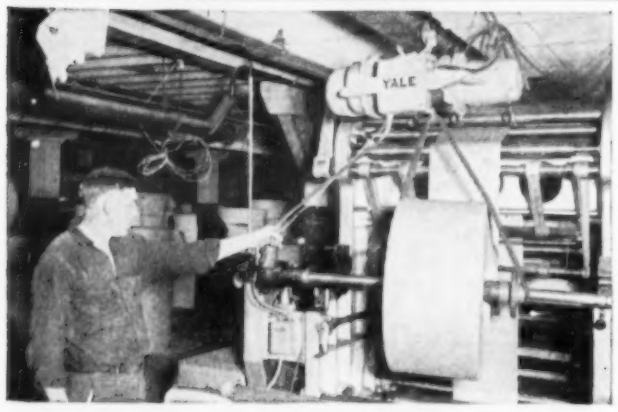


AIR-COOLED YALE CABLE KING WIRE ROPE ELECTRIC HOIST DOESN'T OVERHEAT

- Exclusive air-cooling and positive load brake lubrication make this hoist ideal for continuous heavy-duty service.
- Lifting speeds range up to 72 F. P. M. on some models.
- Push-button control leaves one hand free to guide the load—makes "inching" easy.
- Wire rope, with hemp-lubricated center for long life, has flexibility for side lifting.
- Wide range of models in capacities from ¼ to 12 tons. Winches up to 3 tons. Write for literature.

YALE — THE YALE & TOWNE MANUFACTURING CO. Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

▲ Mention Item NED-4199 when writing ▲

Build-in **Veeder-Root** Counters and Build Up Your Product's Sales!

Veeder-Root Counters can be *engineered into the design* of almost all types of machines. They add new usefulness to a product. They help prove the product's service guarantee. They help prevent errors, delays, shortages, overruns. They help provide an equitable basis for wage payment and incentives. Or they can help to co-ordinate production and work-schedules more closely—as well as anticipate maintenance needs.

VEEDER-ROOT, INC.
HARTFORD 2, CONNECTICUT

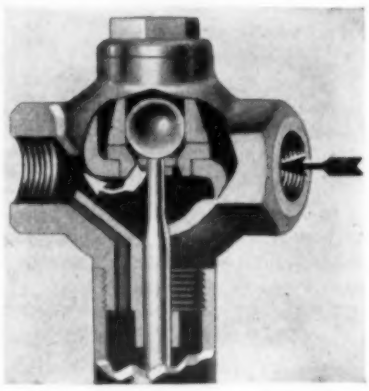
▲ Mention Item NED-4200 when writing ▲

FLOOR CLEANING MAGNET

Redesigned with 50 per cent increase in magnet power, Multilift Rotary Magnetool will pick up steel scrap or parts from shop floors, parking lots and driveways. It can be used also for removing tramp iron from liquids and powders and for separating magnetic and nonmagnetic products. Magnetic tube rotates with wheels as unit is pushed or pulled over surface, and it loads automatically to depth of ¾-inch. Unloading is accomplished by pushing wiper ring from one end of tube to other where nonmagnetic area causes instant release of load. Standard sizes range in width from 9 to 24 inches. Made by **Multifinish Mfg. Co.,** Dept. 457A, 2114 Monroe Ave., Detroit 7, Mich.

▲ Mention Item NED-4201 when writing ▲

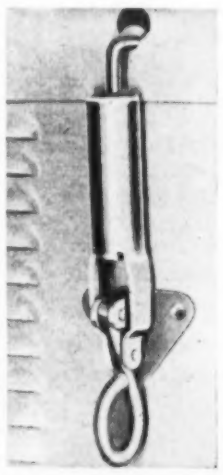
BALL TYPE INNER VALVE



Usable for accurate regulation of steam, water, air or gas at inlet pressures less than 250 pounds per square inch, at reduced pressures below 150 pounds per square inch and where reduced pressure must be adjusted frequently, 400 series ball type inner valves are single seated with ball inner valve actuated by rubber diaphragm. Ball centers freely on seat with uniform contact all around which assures tight closing at moment it seats. When off seat, stainless steel ball is free to turn so that all parts are exposed in turn to scouring action of flow, and any wear which may occur will be evenly distributed. Made by **Klipfel Mfg. Co.,** Hamilton, O.

▲ Mention Item NED-4202 when writing ▲

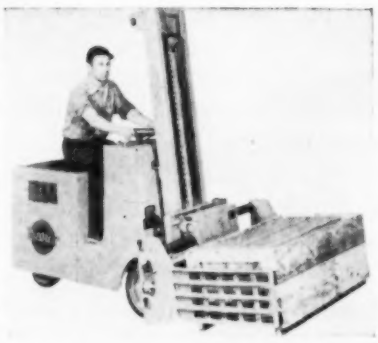
HOOD FASTENER



Originally designed for engine hoods, heavy-duty spring-loaded hood fastener has many other possible applications including use on air conditioning installations, marine power units, power plants, heating equipment, industrial ovens and railroad equipment. It is 7 inches long, has take-up of 7/16-inch and retains, in closed position, approximately 40 to 50 pounds tension. Three rivets hold fastener in place, while hole drilled through metal panel to be secured accommodates bolt unit. To close, handle of spring fastener is pushed down, and bolt locks against rim of hole. Flip of handle releases fastener and permits bolt unit to be withdrawn. Made by **Donaldson Co.,** 666 Pelham Blvd., St. Paul 4, Minn.

▲ Mention Item NED-4203 when writing ▲

CLAMP TRUCK



Utilizing hydraulically operated clamp arms to grip load for lifting and transporting, Baker clamp truck facilitates handling of such bulky items as oil drums, barrels, wood boxes, paper rolls and bales. Since there is no need for loading items onto skids or pallets or for adjusting grabs, hooks and slings, truck speeds materials handling operations.

Welded steel clamp with dual double-acting hydraulic cylinders is mounted on truck lift carriage with control valve in operator's compartment. Connecting hydraulic lines are high-pressure hydraulic hose clipped to lift chains. Hydraulic system of truck supplies necessary oil under pressure to clamp cylinders. Since pressure required is under full control of operator, loads varying from fragile items to heavy industrial equipment can be handled. Made by **Baker-Raulang Co.,** 2179 W. 25th St., Cleveland 13, O.

▲ Mention Item NED-4204 when writing ▲

To Sneak Profits when You Seal with

Leaks on lines carrying oil (hot or cold), gasoline, kerosene and high pressure steam are a costly waste. Key Graphite Paste provides a perfect seal for these lines. It expands under heat but will not freeze the connection. Joints completely sealed with Key Graphite Paste can be easily disconnected without damage to threads or gaskets. Eliminate expensive leakage with Key Graphite Paste. Listed by Underwriters Laboratories.

Try Key Graphite Paste in your own Plant at no cost. Send for liberal free sample.

KEY COMPANY
2601 McCasland Ave., East St. Louis, Ill.

KEY Company

▲ Mention Item NED-4205 when writing ▲

Write for these two SPEEDAIRE bulletins

LEARN how Speedaire, Cleveland's fan-cooled, worm-gear speed reducer saves money, space and weight.

Because it is fan-cooled, Speedaire will do more work—will deliver up to *double the horsepower* of standard worm units of equal frame size.

Ask for Catalog 300 and "More Horsepower Per Dollar". The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

CLEVELAND Worm Gear Speed Reducers

For personalized service, Write or phone John E. Millikan Cleveland exch. VUlcan 3-4560

▲ Mention Item NED-4206 when writing ▲

Cut Air-Hose Costs — Prevent Accidents
Speed-up Production — Save Time . . .

with **CHAMPION AIR-HOSE REELS**
FOR CEILINGS—WALLS AND FLOORS

Champion Air-Hose Reels more than pay for themselves in the hose they SAVE. Champion Reels keep hose *off-the-floor,* eliminate the danger of tripping. Air-hose is always convenient to operator . . . a time saver that speeds-up production. Stays put at desired length—a slight pull rewinds hose at governed speed. Fully enclosed reel housing with swivel or stationary mounting. Furnished with 30 or 33 foot hose. Write TODAY for complete data sheet.

2613

CHAMPION PNEUMATIC MACHINERY CO.
8180 SOUTH CHICAGO AVENUE • CHICAGO 17, ILLINOIS

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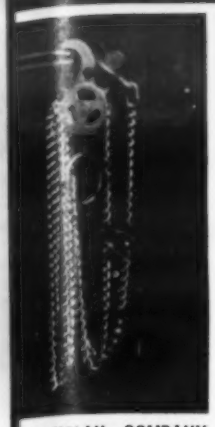
STOP SMASHING fingers, limbs, lives!



NOLAN ONE MAN CAR DOOR OPENER

One man can open the most binding balky box car door with the Nolan Car Door Opener. Get greater safety . . . speed loading and unloading schedules . . . order an ample supply to fill your needs today!

• No strained muscles. No slips or falls. No broken arms, legs or mashed fingers. No fatalities. No time wasted. No "gangs" needed. No time loss.

Write for free descriptive literature.

THE NOLAN COMPANY, 128 Pennsylvania St., Bowerston, O.
Formerly The Mining Safety Device Co.

▲ Mention Item NED-4208 when writing ▲

For SHEARING Cold Metal

"RED STREAK"
Forged Rotary Shears

In cutting sheet or strip metal up to .250", Simonds Shears deliver top performance either singly or in gang-slitting setups. Made of special Simonds steel, super-sharpened and accurately ground, these precision cutting tools stay on the job with fewest trips to the grinder. Made in High Chrome, Special Alloy, and High Speed Steel, for every type of job. Order from your Distributor.

"Tungsweld" Shear Blades

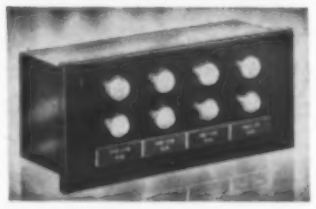
For cutting thin metals, there's nothing to match the welded high speed steel cutting edge of "Tungsweld" Blades. Substantial savings are made in cutting unannealed sheets up to 16-gauge, and annealed sheets up to 3/16". "Tungsweld" Blades boost production and cut sharpening time and costs. Order from your Distributor.

SIMONDS SAW AND STEEL CO.
FITCHBURG, MASS.
Other Divisions of SIMONDS SAW AND STEEL CO. making Quality Products for Industry
SIMONDS Special Electric Furnace Steels · SIMONDS Grinding Wheels and Grains · SIMONDS Simonds Products for Canada

SIMONDS METAL-CUTTING SHEARS

▲ Mention Item NED-4209 when writing ▲

INDUSTRIAL SIGNAL SYSTEMS



Intended for use where sound and visual alarms are required to indicate failure or changes from normal, these multiple signal and alarm systems for process work, power plant and similar applications make possible safety shut-downs, sequencing or interlocking of plant operations. They can be actuated by any remote switch, thermostat, floatswitch or by any type equipment which can be adapted to operation by electric impulse to open or close small relay. During normal operation, bulbs glow dimly; under abnormal conditions two signal lights go on, and warning is given by horn or other sound device. Horn is turned off and white light goes off when failure is acknowledged by operator. Various combinations of lights and signals are available to indicate trouble line, and cabinets can be obtained in multiple units of up to 12 in single box. Made by **Panalarm Products, Inc.**, 7214 N. Clark St., Chicago 26, Ill.

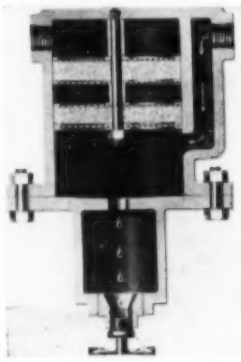
▲ Mention Item NED-4210 when writing ▲

SPRAY GUN

Possessing complete portability, Spray-Gat self-contained spray gun is powered by carbon dioxide cartridge which fits into handle. It can be used anywhere for painting, oiling, disinfecting and waterproofing. Cast aluminum body of gun has rust-resisting brass and stainless steel inserts. Steel container is loaded from bottom and holds 21 ounces of liquid. It is priced at $18.50 and is furnished with three carbon dioxide cartridges; extra charges are ten for $1. Made by **Sullivan-Becker Co.**, Dept. 179, Kenosha, Wis.

▲ Mention Item NED-4211 when writing ▲

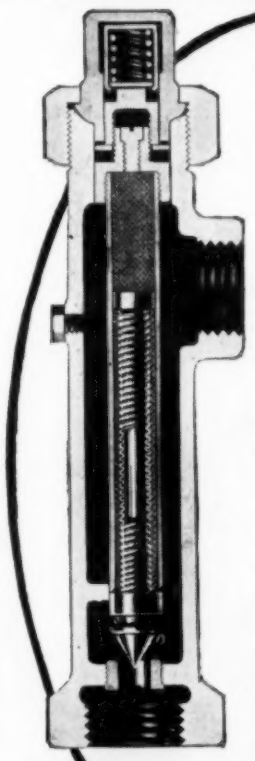
COMPRESSED AIR SEPARATOR



Installed in pipe line just ahead of point of delivery, Murphy Paragon C separator removes oil, moisture and dirt from compressed air at point of use. Expansion and surface contact separate air and moisture in expansion chamber, from which air rises through two cotton felt absorbent pads packed between perforated brass baffles where oil, grit and remaining moisture are removed. Separated moisture descends by gravity to collector where it is held. Strainer cartridge can be cleaned and reused. Moisture is easily drained.

Unit is available in two sizes. Inlet and outlet pipe sizes are ⅜-inch in No. 1 size and ¾-inch in No. 2 size, latter being designed for manifold delivery and accommodating four ⅛-inch or two ¼-inch pipe nozzles. Made by **James A. Murphy Co.**, Fifth & Vine Sts., Hamilton, O.

▲ Mention Item NED-4212 when writing ▲



Steam Trapping Out-of-Doors

THE SARCO No. 87

The Sarco No. 87 illustrated is intended particularly for draining long steam lines and high pressure heating coils where condensate cannot be returned to the boiler. It can be adjusted to deliver a continuous stream of condensate at temperatures below 212° F. so that no steam is wasted by re-evaporation.

The same trap is also furnished for use as an inexpensive temperature regulator in connection with process steam heated equipment and tanks heated by steam coils. Catalog 250 and 550.

210

SARCO SAVES STEAM
SARCO COMPANY, INC.
Empire State Bldg., New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

▲ Mention Item NED-4213 when writing ▲

PROTECT FROM LIGHTNING

MOTORS . . . CONTROL . . . METERS
served by exposed low-voltage lines

General Electric's recently improved Thyrite Service Protector offers a reliable, inexpensive method of protecting low-voltage equipment from lightning. Install indoors or out, for protection of meters, motors, control equipment, or other apparatus connected to exposed circuits up to 650 volts. The Thyrite valve element allows free discharge of lightning currents to ground, with but negligible power follow-current for less than a half-cycle.

The Thyrite Service Protector is already widely used in oil fields and on power service entrances in industries—preventing costly damage to equipment. Available for single, double, or three-pole service. For full information including prices ask the nearest G-E Apparatus Office for Bulletin GEA-2977 or write *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

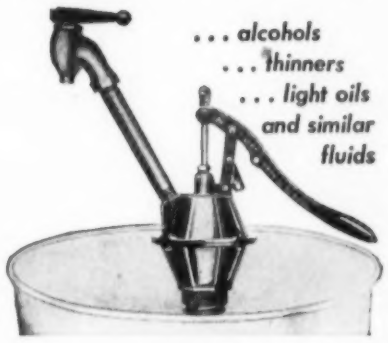
GENERAL ELECTRIC

▲ Mention Item NED-4214 when writing ▲

NEW! FOR VOLATILE LIQUIDS

Long Life provided by nylon diaphragm

Leak Proof with positive shut off in fell spout



. . . alcohols
. . . thinners
. . . light oils
and similar fluids

Fast pumping with less effort. Short strokes, large volume—up to 15 gallons per minute. Trouble-free simplicity. No cylinders, pistons, rings or leathers. Valves are iminated bakelite, valve springs are bronze. Dirt or wear cannot cause suction loss. Unaffected by moisture or condensation.

Only $12.75 complete. Shipped on open account.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

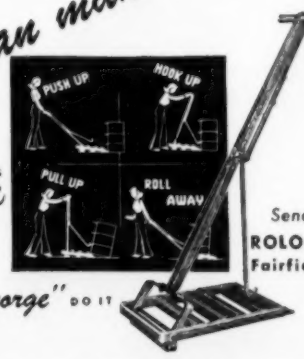
2701 W. Huntingdon St., Philadelphia 32, Pa.

RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

▲ Mention Item NED-4215 when writing ▲

We interviewed 9,872 tote Boxes who said, "We'd rather be hauled by *"George"* than any other truck" . . ."

No other "George" can make this claim!



With apologies to you know who

LET "George" DO IT

Send for Folder N
ROLOCK Incorporated
Fairfield, Connecticut

12RG48

▲ Mention Item NED-4216 when writing ▲

Security
THE DEPENDABLE
LOCKNUT
WORTHY OF ITS NAME

Positive, dependable, automatic locking in any position on bolt. Does not require bolt tension. Stays put exactly where you wrench it, regardless of vibration violent enough to destroy the bolt itself.

Government test reports show 30 successive applications and removals with no appreciable wear on bolt or nut and no reduction in locking power.

Made in complete size range from 3/8" thru 2" N.C. or N.F. threads.

Standard equipment on all types of railroad equipment including diesel locomotives, automotive farm implements, road building machinery, conveying equipment, mining equipment and maintenance pumps and compressors, oil well and refining equipment, machine tools and presses.

SECURITY LOCKNUT CORPORATION
1815 N. Long Avenue, Chicago 39, Illinois

▲ Mention Item NED-4217 when writing ▲

LAMINUM* SHIMS GIVE THE FULL SAVINGS OF SHIM DESIGN!

PRECISION ADJUSTMENTS by simply peeling laminations. No grinding, miking, filing. Machining tolerances are greatly increased because the shim provides for exact fit and takeup.

AT-THE-JOB ADJUSTMENTS. No need for standby lathe or operator. The only tool required is a jackknife to peel off a .002" or .003" lamination.

Send today for chart illustrating 46 money-saving, time-saving applications, detailed specifications, sample of LAMINUM.

*Laminum Shims (Reg. U. S. Pat. Off.) are solidly bonded laminations of .002 or .003 inch precision gauge brass or steel with a microscopic layer of metallic binder. Cut to your exact blueprint specifications.

LAMINUM
THE SOLID SHIM THAT peels FOR ADJUSTMENT

LAMINATED SHIM COMPANY, Inc.
2306 Union Street, Glenbrook, Conn.

SHIMS • SHIM STOCK • STAMPINGS • AN-COR-LOX NUTS

▲ Mention Item NED-4218 when writing ▲

STAINLESS TUBING DATA

on
- Velocity Constants
- Mass Velocity Constants
- Cross Sectional Areas of I. D. and O. D.
- Sq. Ft. Internal and External Surface Per Lineal Ft.
- Physical Properties
- Available Sizes

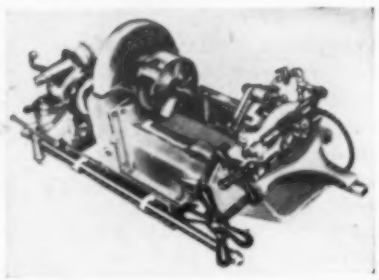
Return the coupon today for your Carpenter Stainless Tubing Slide Chart.

THE CARPENTER STEEL COMPANY
Alloy Tube Division • 118 Springfield Rd., Union, N. J.

NAME_____ TITLE_____
(Please Print)
COMPANY_____
(Firm Name Must Be Given)
ADDRESS_____
CITY_____ ZONE_____ STATE_____

▲ Mention Item NED-4219 when writing ▲

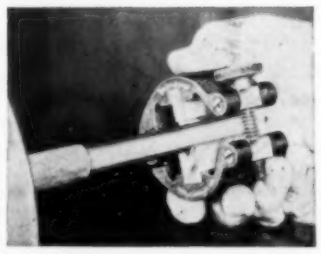
PIPE & BOLT MACHINE



Incorporating automatic switch lock which makes it impossible to start machine unless chuck wrench is in its holder and eccentric spool pipe rest that is independent from revolving spindle, model A pipe and bolt machine protects workman from injury and eliminates leaking flat-sided threads caused by spindle rock. Machine will cut and thread pipe in diameters from 1/8 to 2 inches; with driveshaft and geared tools, range is increased to 2½ to 12-inch pipe. It cuts off ¼ to ¾-inch bolts and will thread ¼ to 2-inch bolts. Machine can be powered by 110, 220, 440-volt or special voltage motors, as required. Made by **Beaver Pipe Tools, Inc.**, 333 Henry St., Warren, O.

▲ Mention Item NED-4220 when writing ▲

EXTERNAL HONE



Usable for producing precision external diameters quickly and efficiently, Delapena external hone will correct ovality, remove taper and produce microfinish. It consists of body member into which is fitted one of series of guide blocks together with stone holders to suit diameter of work to be honed. Body member consists of two hinged parts which are held apart by spring against adjustable stop or control screw. Stones for roughing, finishing and polishing can be supplied, and they are mounted on holders which in turn are mounted on hone body. Truing stick is provided to assure proper alignment of honing stones with respect to guide block. Hones can be obtained for external diameters ranging from 1/16 to 1 inch. Distributed by **Motch & Merryweather Machinery Co.**, 715 Penton Bldg., Cleveland 13, O.

▲ Mention Item NED-4221 when writing ▲

LINEAL TACHOMETER

Of friction drive type, model 1646 Productimeter lineal tachometer can be used to measure surface speeds in ranges of 20 to 200 yards per minute or 60 to 600 feet per minute. Other ranges can be supplied on order. It is suitable for use in textile and paper mills, printing plants and other plants where measurement of lineal speed is required.

Device is mounted by placing rubber wheels on material at point where measurement is to be taken, and bracket is fastened to table or frame of machine. Head can be rotated through 360 degrees to provide reading at any angle. Bracket and swivel hinge allow for unlimited vertical and horizontal positioning of tachometer. Made by **Durant Mfg. Co.**, 1922 N. Buffum St., Milwaukee 1, Wis.

▲ Mention Item NED-4222 when writing ▲

POWER SAW BLADE

Sized to fit type A-4 Guild saw, power saw blade can be used to cut slate-surfaced insulating siding such as Insulbrick, Brixite, Insulstone and Celobrick. Siding of this type is cut from rear surface to depth which justs avoids slate; at this depth siding can be broken off clean. Teeth of blade have no set and are ground to knife edge on periphery. Blade cuts with slanting edge of teeth leading, and it cuts material cleanly and reduces gum-up to minimum. It can be cleaned while running by holding to it piece of felt dipped in kerosene or resharpened by holding stone against it. Made by **Porter-Cable Machine Co.**, 1710 N. Salina St., Syracuse 8, N. Y.

▲ Mention Item NED-4223 when writing ▲

INSTALL INDOORS OR OUT

★ Dirt-proof and corrosion-resistant
★ Heat exchanger is practically self-cleaning
★ 75 to several thousand hp.

THE ideal motor for dirty, corrosive locations. All electrical parts — including stator core — are enclosed. Simple tube-type heat transfer system keeps temperature within rated limits. Cleaning is rare because air passages are unrestricted and air flow removes foreign matter.

Important savings have been proved in three years of field operation. Also in explosion-proof designs. For complete information, see your A-C Sales Office or write for bulletins 05B7150 and 51R7149. A-2729

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

▲ Mention Item NED-4224 when writing ▲

MORE DRIVE ON THE JOB WITH THE RIGHT DRIVER FOR EACH JOB . . . . . .

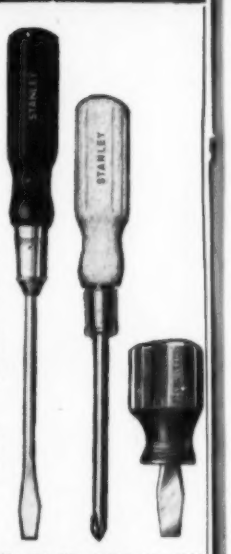
The right Stanley screw drivers for each job save valuable man-hours. Give a good man good tools . . . the right size, type and style for the different screws he's driving. See your industrial distributor. Stanley Tools, New Britain, Conn.

• • •

STANLEY No. 25 . . . blade lengths 3" up to 12"; deeply fluted hardwood handle; alloy steel blade tempered entire length. Bolster construction locks blade into handle and provides greater strength.

STANLEY No. 2702 . . . for Nos. 5 to 9 Phillips Recessed Head Screws, most commonly used sizes. Tempered blade secured in deeply fluted hardwood handle by ears swaged on shank. Other sizes available.

STANLEY No. 1009 . . . handy for tight places. Blade 1¾" long. Many other sizes in this popular construction. Unbreakable composition handle and special analysis alloy steel blade.

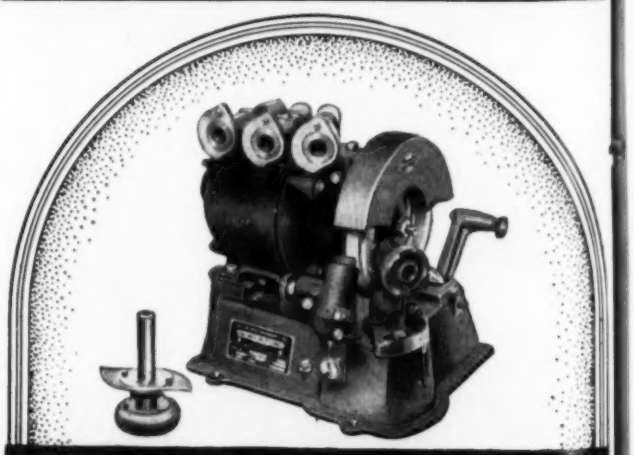


No. 25 No. 2702 No. 1009

THE TOOL BOX OF THE WORLD
STANLEY
Reg. U.S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

▲ Mention Item NED-4225 when writing ▲



BLACK DIAMOND
PRECISION DRILL GRINDER

NO MECHANICAL KNOWLEDGE OR SKILL IS NEEDED TO GRIND SMALL DRILLS

With a Black Diamond, the use of skilled labor is not necessary, because anyone can operate this grinder, keen all small drills properly ground with smooth lips of uniform length—true centered and at the proper angle and correct clearance for fast drilling.

Black Diamond grinding insures fast, precision drilling, reduces drill breakage, saves expensive drill stock and cuts drill sharpening and drilling costs—50% and more.

The built-in Diamond Dresser keeps the grinding wheel sharp cutting and the Web Thinning Attachment efficiently cares for grinding all types of Notched points.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ Mention Item NED-4226 when writing ▲

Here is the latest Biddle Bulletin which presents the *complete* line of "Megger*" Insulation Resistance Testing Instruments. In this handy reference guide you'll find a selection chart which will enable you to quickly select the "Megger" instrument best suited to your needs. And, one section covers special uses and practical suggestions for almost every field of application. While you think of it, mail your request NOW for Bulletin 21-05-D.

*T. M. REG. U. S. PAT. OFF.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ Mention Item NED-4227 when writing ▲

FLAME TYPE CONTOUR CUTTER

Standard acetylene machine-cutting blowpipe is employed on this Heath contour cutter to reproduce automatically and accurately any desired pattern in sheet steel or heavy steel plate. Master patterns which are quickly changed are used as templates to guide path of blowpipe.

Pattern-tracing finger incorporates a variable speed, magnetic rotor which exactly follows master pattern in producing flat-shape duplicates in any quantity desired. Optional operating speed permits adjustment to accommodate any gage steel or production procedure such as stack cutting. Rotor diameter of ¼-inch permits accurate tracing of acute and obtuse angles, obverse and reverse curves, slots and projections. Range of practical pattern sizes includes ¾-inch holes to 5-foot diameter shapes.

All moving parts are sealed, ball-bearing mounted and require no lubrication. Two bubble levels and four leveling screws in base assure true horizontal operation. Machine will operate on either alternating or direct current. Because equipment is relatively light in weight, it can be moved about shop to most convenient point for use. Made by **Heath Engineering Co.**, Fort Collins, Colo.

▲ Mention Item NED-4229 when writing ▲

POSTING-FIGURING MACHINE

Built for all forms in standard business use, this Underwood Sundstrand portable posting machine performs fourteen distinct automatic operations through use of interchangeable control plate. In addition to posting of accounts receivable, accounts payable, general ledger, payroll and other records, it can be used for problems of addition, subtraction, multiplication and division. Operation is quickly learned since all work is accomplished with ten-key natural sequence keyboard built for touch figuring. Dates and descriptive symbols are automatically printed, and slide automatically selects debit or credit column.

Motor is completely enclosed, and machine is finished in nonglare gray with laminated plastic keyboard cover panels and ringless ivory plastic keys. Made by **Underwood Corp.**, Dept. NED, 1 Park Ave., New York 16, N. Y.

▲ Mention Item NED-4230 when writing ▲

Wolverine
DROP-FORGED QUICK-ACTION
TOGGLE CLAMPS
For Heavy Duty and High Production

Wolverine Toggle Clamps have been used extensively in the automotive, welding, fabricating, woodworking and metal working industries for over 20 years. Compare them with other clamps as to speed, strength, durability, accuracy, versatility and economy. There is a size and type of Wolverine clamp to suit your needs, write for bulletin C-48.

IMMEDIATE DELIVERY

SINCE 1926

WOLVERINE TOOL CO.
1480 East Woodbridge Street • Detroit 7, Michigan

▲ Mention Item NED-4232 when writing ▲

Eliminate "DEAD" Storage Space . . . Speed Up Handling with FARQUHAR FLEXIMOUNT CONVEYORS

FARQUHAR Fleximount (Model 435 FM shown here) Freight Conveyors move bags, bales, boxes, cartons, and bundles *faster, cheaper, easier* when your handling operations call for loading, piling, stacking or moving from floor to floor.

Handy, flexible, Farquhar Fleximount, with quick-acting hydraulic center lift, teams up with horizontal and gravity conveyors to make good use of "dead" storage space—speeds up and smooths out your handling operations. Designed for handling units up to 150 lbs. each. Available in two boom sizes and with a variety of attachments and mountings, depending upon your requirements

For complete information on the right Farquhar materials handling Conveyor for your use, write:

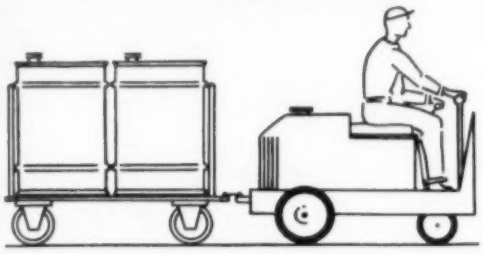
A. B. Farquhar Company, 204 Duke Street, York, Pa., or 620 W. Elm St., Chicago 10, Illinois, or Portable Machinery Sales, 803 Broadview Ave., Toronto, Ontario.

Farquhar
PORTABLE OR PERMANENT MATERIALS HANDLING
CONVEYORS

HYDRAULIC PRESSES • FARM EQUIPMENT • FOOD PROCESSING MACHINERY • SPECIAL MACHINERY

▲ Mention Item NED-4233 when writing ▲

where oil resistance is a factor...



..you get longer wear with
MONARCH
NEOPRENE
SOLID TIRES

Monarch Neoprene Tires are another product of Monarch specialization in industrial solid tires. Like all Monarch Tires, they are carefully designed and engineered to their specific application with the idea of giving maximum service at minimum cost. Thousands of Monarch Industrial Solid Tires are used every month as original equipment by leading manufacturers of industrial vehicles.

Replacement tires available through the manufacturer of your equipment. Immediate delivery on most popular sizes.

THE MONARCH RUBBER COMPANY • HARTVILLE, OHIO
Specialists in Industrial Solid Tires
Manufacturers of Molded Mechanical Rubber Goods

▲ Mention Item NED-4228 when writing ▲

Revolutionary NEW WAY to Control DRILLING SPEEDS

New Instant
SPEED CHANGER with QUADRILL—4-position Drill Head

NOW—a quick, positive way to insure correct, efficient drilling and tapping speeds. Instant SPEED CHANGER, with just a touch of a lever, gives you slow speeds for tapping and a change of speeds for large and small drills—the proper speed for the job. Eliminates cumbersome and often unused belt changes. . . . QUADRILL, the 4-position drilling and tapping turret head for all drill presses, provides 4 operations on 1 spindle. Speeds operations. Cuts production costs.

SPEED CHANGER and QUADRILL sold as unit or separately. Specify size and make press and motor shaft diameter.

Write for literature and prices

CHICAGO DRILLET CORPORATION
1755 N. Winchester Ave., Chicago 22, Illinois

▲ Mention Item NED-4231 when writing ▲

Costs Go Low... as materials flow on the Crescent Electric PALLETIER

What It Can Do For You . . .

Save labor — one man replaces a crew
Speed production — increase worker safety
Step up loading and unloading of freight cars
Stack loads high — utilize more storage space
Turn in narrow radius

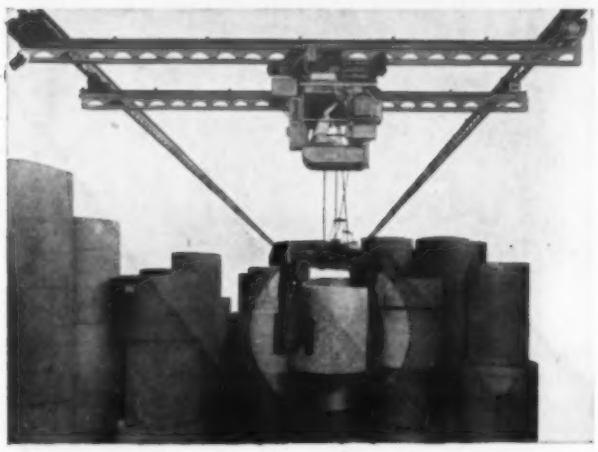
Send For Free Bulletins

Illustrated bulletins show how Crescent PALLETIER fits into your materials handling operations. Capacities range from 1,000 to 6,000 lbs.

Crescent
TRUCK COMPANY, 1050 WILLOW ST., LEBANON, PA.
INDUSTRIAL TRUCK AND TRACTOR SPECIALISTS SINCE 1917

▲ Mention Item NED-4234 when writing ▲

50% to 150% GREATER CAPACITY



No Aisle Space Needed Here!

A Cleveland Tramrail crane and roll grab installation piles rolls vertically 42 ft. high and more Utilizes entire floor area Increases storage 50% to 150%. Cuts spoilage of materials tremendously Handles rolls to 6000 lbs., 24" to 60" diam., 86" long

GET THIS BOOK! Gives details on roll handling and storage.

Write for BOOLET 2012

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6612 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

▲ Mention Item NED-4237 when writing ▲

New Osborn Power Driven Buffbrush* speeds production, reduces "rejects" of high finish stainless steel parts produced by The D. L. Auld Co., Columbus, Ohio

WITH the trend toward extra touches of bright, gleaming trim, added bits of metal finery on cars and home equipment, there is an increasing use of highly finished stainless steel by automotive and appliance manufacturers.

To that end, The D. L. Auld Company, Columbus, Ohio, one of America's outstanding producers of polished and plated parts for the automotive and appliance industries, is meeting today's changing market requirements with new product developments and production methods.

And Osborn's sensational new power driven Buffbrush*, used with an abrasive compound on an automatic machine, provides the method for producing a superior finish on automobile trim parts and refrigerator trim strips formed from stainless steel. Parts are loaded into holders on an endless belt and carried under these rotating heads equipped with Osborn Buffbrushes. The result is a high lustre finish so desirable on stainless steel parts.

If *you* are interested in cutting costs and improving metal finishing operations, contact us at once. A qualified Osborn sales engineer will provide you with factual data applicable to your power brush problems without obligation. Write to...

THE OSBORN MANUFACTURING COMPANY
Dept. 159, 5401 Hamilton Avenue Cleveland 14, Ohio
*Trademark

Osborn Brushes

WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY
POWER DRIVEN BRUSHES • PAINT BRUSHES • MAINTENANCE BRUSHES

▲ Mention Item NED-4238 when writing ▲

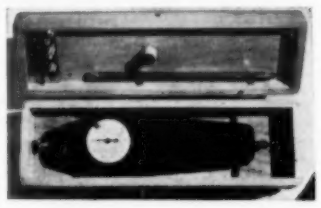
MARKING ASSEMBLY

Cylindrical and flat parts as well as other shapes can be marked efficiently in any foot, arbor or punch press when it is equipped with simple marking assembly. V-block is used as nest or stamping block assembly, and stamping die can be flat or sharp face, engraved on flat surface. Lettering or numbering will stamp full upon cylindrical surface unless cylinder or rod radius is less than double the size of characters to be marked.

Illustration shows foot press with shank style stamping die in ram and V-block in shoe. Latter is centered so that when cylindrical part is placed on it, press blow will stamp mark in exact center of part, regardless of diameter. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ Mention Item NED-4239 when writing ▲

FORCE INDICATOR



Utilizing precision compensated spring system to give easy force measurements accurate to ½-graduation or within 0.5 per cent of full scale of dial indicator, this force indicator has capacity of 10 pounds and wide range of usefulness. Spring system is composed of main compression spring, compensating extension spring, load transmission rod-centering springs and springs internal to dial indicator. Force is applied to system through load transmission rod. Accurate force indications are possible because relationship between force and spring displacement is linear throughout dial range.

Instrument is shaped for one-hand operation, and fittings make varied applications possible. Stainless steel attachments include thrust button, pulling hook, conical point-force applicator, V-notch thrust fitting for lateral rod pressures, chisel fitting for re-entrant edges and notches, and 6-inch extension rod. Cords and tapes, used with hook, are handy for tests of tangential forces. Made by **Hunter Spring Co.**, Dept. NED, Lansdale, Pa.

▲ Mention Item NED-4240 when writing ▲

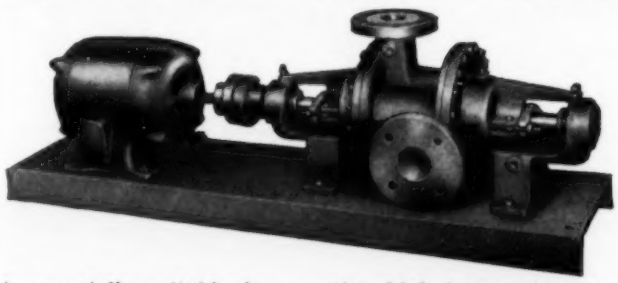
SPINDLE SHAPER

Powered by either 1 or 1½-horsepower electric motor, model S1140 two-speed vertical spindle shaper provides 7000 or 11,000 revolutions per minute to assure correct speed with different size cutters. Its 3-inch vertical spindle, bearing assembly and motor move as unit with elevation being controlled by handwheel and graduated dial. Table measures 22 x 33 inches. Independently adjustable guides are controlled by handwheels and can be removed quickly. Complete guarding is provided for accelerated work speed. Made by Walker-Turner Div., **Kearney & Trecker Corp.**, 129 Berkman St., Plainfield, N. J.

▲ Mention Item NED-4241 when writing ▲

TURBINE-TYPE PUMPS

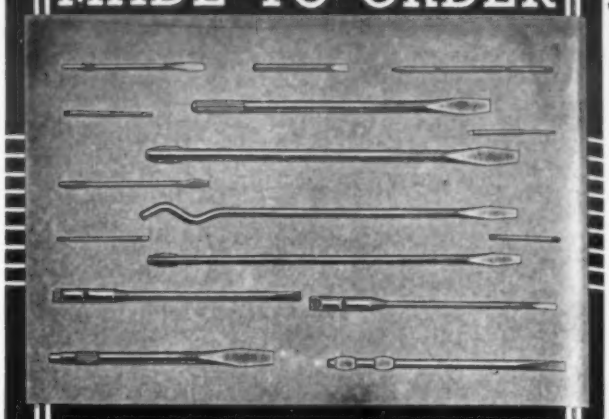
Applicable to variety of industrial liquid handling operations on high head small capacity service, line of single and two-stage water jacketed turbine-type pumps



is especially suitable for pumping high temperature and highly volatile liquids. Multivane turbine impeller handles vapor or air along with liquid so as to prevent vapor lock within pump, and pumps are designed to compensate for expansion and contraction caused by temperature change in materials handled. Cool liquid circulated through jacketing lowers temperature of any leakage and prevents it from flashing upon exposure to atmosphere. Pumps can be supplied in iron, steel, bronze, stainless steel and corrosion-resistant alloys. Made by **Aurora Pump Co.**, 91 Dearborn, Aurora, Ill.

▲ Mention Item NED-4242 when writing ▲

MADE TO ORDER



Screw driver blades to order for assembly in any type of handle, wooden, composition or plastic.

Points in either keystone or cabinet type. Edge of point carefully made and of uniform thickness.

Shanks are winged, fluted, formed or milled, as shown.

Blades furnished in plain finish, blued or nickle plated.

The Torrington Company
SPECIALTY DEP'T.
Torrington, Conn., U.S.A.

▲ Mention Item NED-4243 when writing ▲

THOMAS
"SPRING BALANCED"
DRUM TRUCK

Stands Upright When Not in Use

- **No Rocking, No Lifting, Loads Itself**
- **Strong, Lightweight, Balanced**
- **Handles Barrels and Drums Up To 1000 Lbs.**
- **Rubber Tired or Semi-Steel Wheels**

Handle more barrels a day with this truck that automatically loads and unloads—never has to be lifted. A rugged coil spring, enclosed in a steel housing, gives faster, smoother action when "breaking over" a load. Securely cradles and carries steel drums or wood barrels regardless of bilge size. Two-in-one chime hook adjusts to any height. Illustration shows how pressure with foot and an easy pull on the handle automatically loads truck. Curved handlebar gives trucker full control of load. Wheels have Hyatt roller bearings. Use a NO. 94 THOMAS Drum Truck for 30 days. You can return it if you are not satisfied.

THOMAS TRUCK & CASTER CO.
3261 Mississippi River Keokuk, Iowa

▲ Mention Item NED-4244 when writing ▲

Experienced shop men say—

"It's *NI-ROD*

for machinable welds in cast iron!"

Machinists like NI-ROD because it makes sound, non-porous welds that machine as readily as cast iron itself. No extra-hard tools or special techniques needed. No valuable shop time lost through fancy set-ups and frequent tool replacements.

Welders like NI-ROD because it is free-flowing, stable-arcing on AC or DC, and fuses well with all grades of cast iron. Preheating and post-heating are seldom required.

Your nearest INCO distributor stocks NI-ROD in 3/32", 1/8", 5/32" and 3/16" sizes. Order a package today and your shop men, too, will agree: *"It's NI-ROD for fast, sound, machinable welds in cast iron."*

Send for your copy of the valuable new free booklet, *"NI-ROD . . . a new electrode for any cast iron welding."*

New Free Booklet

EMBLEM OF SERVICE INCO NI-ROD TRADE MARK
THE INTERNATIONAL NICKEL COMPANY, INC.
69 Wall Street, New York 5, N. Y.

▲ Mention Item NED-4245 when writing ▲

PROTECT SMALL TOOLS AND SUPPLIES—keep them handy in this—

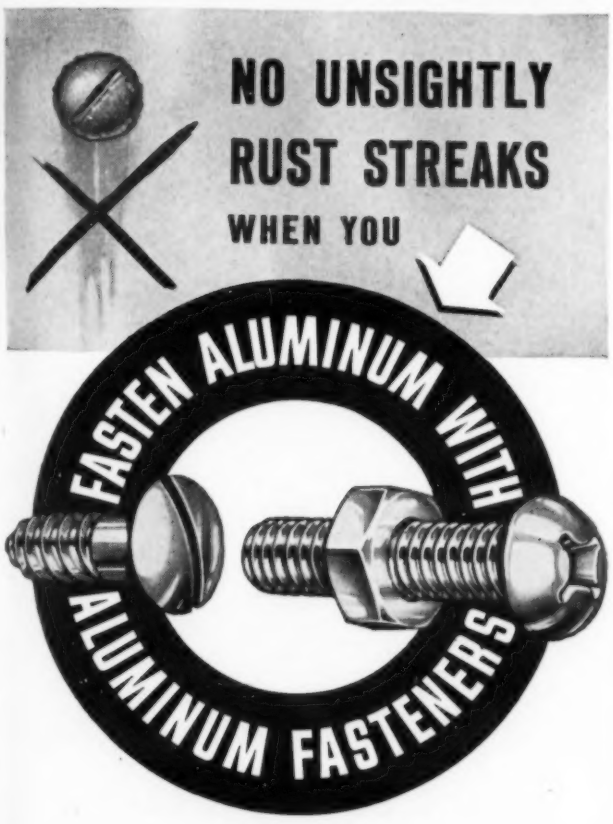
BERGER 24 DRAWER PARTS CASE

Here, in one complete package, is your solution to the troublesome problem of protecting small tools and supplies, yet keeping them readily available. This Berger Steel Parts Case provides 24 non-spillable drawers, giving you a minimum of 72 indexed compartments. Dividers are adjustable on 1" centers, and extra dividers can be supplied to make additional compartments. Construction is all steel, strong and rigid, with baked enamel finish. Overall dimensions are 34¼" wide by 10¾" high and either 12" or 18" deep. Drawer dimensions are 5⁵⁄₁₆" wide by 2¹⁄₁₆" high and either 11⅛" or 17⅛" deep. Similar 12- and 18-drawer cases are available, too. Write for complete information and prices.

BERGER MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION • • • • CANTON 5, OHIO

▲ Mention Item NED-4246 when writing ▲

NO UNSIGHTLY RUST STREAKS WHEN YOU



WRITE TODAY FOR FREE SAMPLES OF ALCOA ALUMINUM FASTENERS

Get extra sales dividends—stronger, longer lasting, handsomer aluminum assemblies, when you fasten aluminum with Alcoa Aluminum Fasteners!

Machine screws, wood screws, sheet metal screws, with Phillips or slotted heads; bolts, nuts, washers, lock washers, solid or tubular rivets, cotter pins, in all popular sizes.

Write today on your letterhead for samples to ALUMINUM COMPANY OF AMERICA, 695 Gulf Building, Pittsburgh 19, Pa.

ALCOA Aluminum FASTENERS

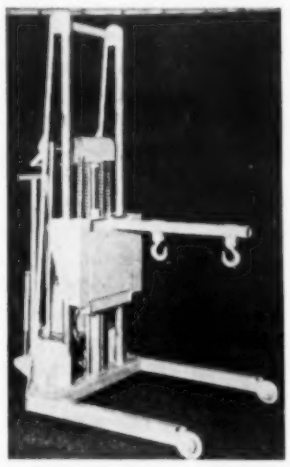
▲ Mention Item NED-4247 when writing ▲

LEATHER THICKNESS GAGE

Convenient aid is rendered to leather manufacturers and buyers who must make on-the-spot checks of hides, leather strips and leather sheets by No. 25L pocket-size thickness gage. Large dial is calibrated in leather ounces, each graduation being equal to ¼-ounce, and in addition small dial and pointer graduated in multiples of 8 ounces have been provided to allow checking of leathers up to 20-ounce weight to nearest ¼-ounce. Grain leather snap-button case and complete instructions are furnished with each instrument. Made by **B. C. Ames Co.**, 131 Lexington St., Waltham 54, Mass.

▲ Mention Item NED-4248 when writing ▲

HYDRAULIC LIFT TRUCK



Use of special truck to handle delicate but 300-pound electrical instrument assemblies and pack them into special containers has eliminated damage to products and increased speed of packing operation. Patterned after standard hydraulic high lift truck, this special model has hydraulic boom which elevates from 16 inches in lowered position to 70 inches when fully elevated. For packing operation, truck is placed so that boom is directly over assembly to be packed. Sling arrangement to lift assembly is fastened to two hooks suspended from boom, and load is lifted by means of hand pump actuating hydraulic hoist. After load is raised, shipping crate is placed in position between base forks of truck, and load is gently lowered into crate by means of fingertip control lever. Made by **LYON-Raymond Corp.**, 2080 Madison St., Greene, N. Y.

▲ Mention Item NED-4249 when writing ▲

DEEP THROAT PRESS

Capable of handling large bulky jobs as well as standard punch press operations, No. OG 5-ton Rousselle deep throat press is available in both bench and floor models. Frame is of heavy semisteel ribbed casting. Heavy duty clutch can be set for single stroke or continuous operation. Press operates at 250-strokes per minute and complete with motor weighs approximately 700 pounds. Made by **Service Machine Co.**, Dept. BB, 7627-33 S. Ashland Ave., Chicago 20, Ill.

▲ Mention Item NED-4250 when writing ▲

Empco JACKS

Set and KEEP Your Machines LEVEL!

Machine Tool Manufacturers strongly emphasize the need, not only to set machines level, but to keep 'em that way. Periodic re-leveling is essential for accurate work tolerances. How often, depends on the type of foundation. No method of machine setting is stable enough to maintain the accuracy of initial leveling. It is important to check after first month of operation, then check periodically and re-level whenever necessary.

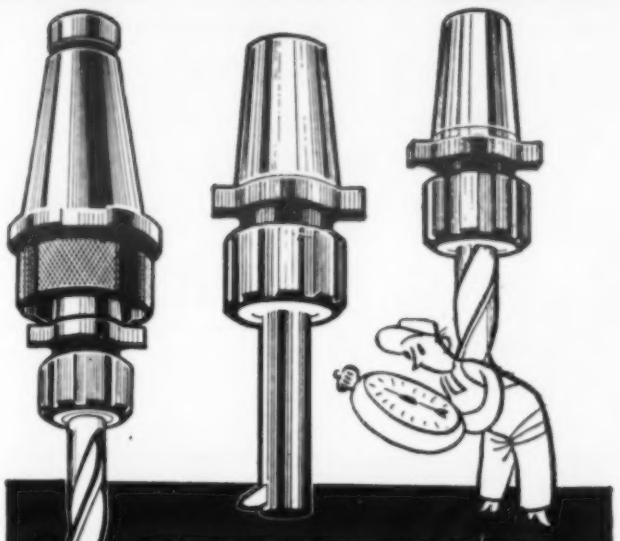
When a machine is set on EMPCO JACKS, the whole operation is the work of but a moment: Simply apply a wrench to the "hex" screw head, turn right or left until your level indicator reads "zero."

3 SIZES
No. 1—2" normal height
No. 2—2⅝" normal height
No. 3—3½" normal height

EMPCO

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVE. DETROIT 12, MICH.

▲ Mention Item NED-4251 when writing ▲

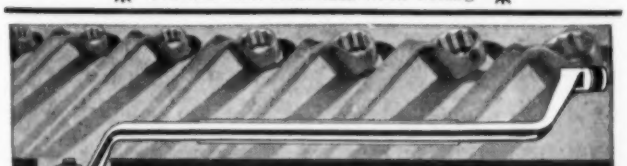


NEW INGENIOUS UNIVERSAL "KWIK-SWITCH" TOOL HOLDER PERMITS 10 SECOND TOOL CHANGES WITHOUT ACCURACY LOSSES

— UNIVERSAL ENGINEERING CO.

FRANKENMUTH 6, MICHIGAN

▲ Mention Item NED-4252 when writing ▲



DURO-CHROME New THIN-WALL Box Wrenches for EXTRA PRECISION STRENGTH

Specially designed for work in extremely close quarters . . . See how they fully engage nuts even in deeply recessed pockets. Special chrome alloy-steel...forged for EXTRA strength, 20% above Government specifications. EXTRA durability. The satin-smooth chrome skin gives EXTRA protection against rust and corrosion.

Sockets are accurately broached to assure perfect fit for EXTRA precision . . . every movement of the handle is transferred to the work, there is no lost motion...no slack to take up. All are perfectly matched and balanced to do the job easier . . . faster. .

Each wrench has that instantly recognized Duro Quality. DURO METAL PRODUCTS CO., 2649 No. Kildare Ave., Chicago 39, Illinois.

DURO TOOLS (HAND TOOL DIVISION)
The Mechanic's Best Friend
OVER 2 BILLION BUILT SINCE 1916
2335 R
ALSO MAKERS OF DURO MACHINE TOOLS

▲ Mention Item NED-4253 when writing ▲

7¢ A DAY to HEAR WELL

A SMALL PRICE to pay to hear clearly . . . day after day . . . in noisy locations . . . where accuracy of hearing is essential in making vital telephone decisions. This is possible in your plant with a Burgess-Manning Acousti-Booth.

Burgess-Manning Model 211 Acousti-Booth has thick, sound-absorbent walls that soak up noise. Airy . . . easily moved . . . compact . . . of sturdy construction . . . it provides a quiet spot for telephoning. Conversations are clear . . . "private." Ideal, also, for noisy, congested locations in stores, hotels, and airport terminals.

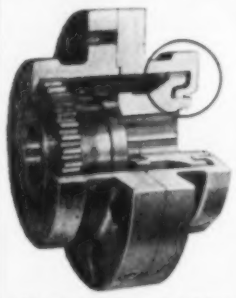
ORDER Burgess-Manning MODEL 211 Booth today

"Scout" Model 602 is ideal for noisy, congested locations in busy factories. Rugged, all-steel construction.

MAIL COUPON FOR FREE BULLETIN
Burgess-Manning Company
743-C East Park Avenue, Libertyville, Illinois
Please send illustrated booklet describing the Burgess-Manning Model 211 Acousti-Booth.
NAME
FIRM NAME
STREET-CITY

▲ Mention Item NED-4254 when writing ▲

HOW FAST'S Couplings Deliver UNINTERRUPTED POWER!



Oil-protecting "rocking bearing" allows *freedom of movement* to compensate for misalignment because *spherical* base has same axis as hub spline faces.

You'll get *uninterrupted* service from Fast's Couplings because they are made *without perishable materials of any kind.* Nothing to wear, nothing to replace! Exclusive "rocking bearing" guards load-carrying oil from dust, moisture. When you buy Fast's, you get years of top engineering experience, Koppers' high standard of workmanship, unexcelled coupling service. *Specify* Fast's, the *original* gear-type coupling.

Koppers Co., Inc., Fast's Coupling Dept., 286 Scott St., Baltimore 3, Md.

KOPPERS **FAST'S** *Self-Aligning* **COUPLINGS**

WRITE FOR FREE CATALOG NOW!

Mention Item NED-4255 when writing

ARMSTRONG-BRAY GEAR and WHEEL PULLERS

Quickly and easily pull gears, wheels, pulleys and bearings off of shafts without damage or breakage.

Improved designs make them easy to set up and safe in use—the harder the pull the tighter the grip.

12 types, 40 sizes—2-arm, 3-arm, standard and special STEELGRIP Pullers with drop forged arms and heat treated screws as well as CHAINGRIP Universal Pullers that reach to considerable distances from end of shaft.

Write for Catalog

ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY
CHICAGO 30, U.S.A.

Mention Item NED-4256 when writing

BIN-LEVEL CONTROLS

2 BIN-DICATORS Often Replace 1 Man

BIN-FLO Aerating Units Keep Things Moving

ECONOMICAL MATERIAL CONTROL

DEPENDABLE BIN-LEVEL INDICATION

Mail this Coupon

THE BIN-DICATOR CO., 14615 E. Jefferson, Detroit 15, Mich.

Please send new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units. D-6

Name_____

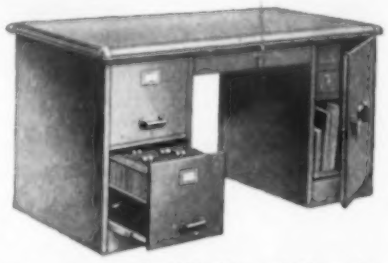
Address_____

City_____ Zone____ State____

Mention Item NED-4257 when writing

STEEL DESKS

Adaptable to any office need, steel desks offer flexibility of arrangement and economical use of space. They can be obtained in various combinations. One arrangement offers filing capacity of regulation four-drawer letter size filing cabinet to enable user to keep records at his finger tips. Variation shown in illustration has safe on one side and two letter-size drawers on other side. Another is equipped with three letter-size filing drawers and safe compartment under lock and key for books and valuable papers.

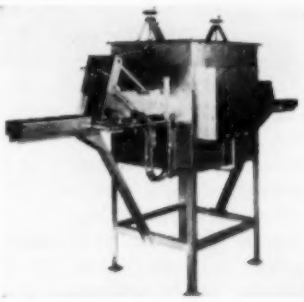


Drawers have spring compressors and are equipped with ball bearing suspension slides permitting them to float smoothly, and center drawer has built-in steel tray for clips, pens and pencils. Desk top is covered with linoleum and trimmed with fine aluminum edging. Desks can be obtained in gray, green, mahogany, grained walnut or knotty pine. Made by **Cole Steel Equipment Co.,** 285 Madison Ave., New York 17, N. Y.

Mention Item NED-4258 when writing

ELECTRIC FURNACE

With maximum power input of 15 kilowatts and high temperature zone area of 4 x 4 x 12 inches, model SNX electric furnace is designed specifically for use in sintering powdered metals, brazing, bright annealing and metallurgical research problems. Normal heat range is 1400 to 2500° F with flash firing to 2750° F. Unit employs Globar element and is of manual pusher type intended for batch treatment on straight-line three-zone system. Work moves from purge, or preheat chamber, through high temperature area and then through water-cooled cooling zone. Both doors are counterbalanced and are equipped with automatically operated flame curtains which prevent contamination of furnace atmosphere when doors are open. Gastight construction is used throughout with connections provided for introduction of controlled atmospheres. Most types of atmospheres can be used in furnace except those which attack silicon carbide elements.

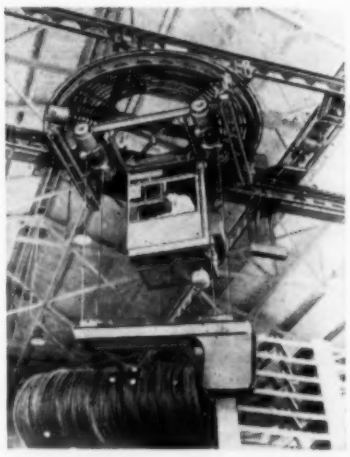


Automatic transformer is provided also with dual deadfront multitap voltage regulating switches, magnetic contactor, automatic temperature controllers and various recorders as process may require. Made by **Pereny Equipment Co.,** 893 Chambers Rd., Columbus 12, O.

Mention Item NED-4259 when writing

ROTATING CARRIER

Operating on Cleveland Tramrail overhead materials handling system, this rotating carrier is capable of hoisting, tilting, trolley travel, bridge travel and rotation. Illustration shows carrier in large warehouse where it was installed to perform complicated coiled rod and wire handling operation. Equipment consists of crane which travels length of building, trolley which travels on bridge from side to side of building and rotating carrier that operates on circular track built into trolley. Carrier has two separate hoists, cables from which are reeved to two ends of hairpin hook which handles rod and wire.



All motions of equipment are controlled by operator in open type cab attached to carrier. He can run unit to any point in building and turn carrier clockwise or counterclockwise through short arcs or complete turns to turn hook to any direction desired. Hook can be raised, lowered and tilted upwards or downwards by separate or simultaneous operation of hoists.

Equipment has following speeds: bridge, 400 feet per minute; trolley, 200 feet per minute; hoist, 50 to 80 feet per minute and rotation, 75 feet per minute. Bridge and trolley control are variable five-speed magnetic type with dynamic braking, hoist control is variable-speed drum type with dynamic lowering, and rotating control is automatically accelerating. This unit was designed to carry 3500-pound load in addition to hairpin hook. Similar equipment for other capacities and operating speeds can be furnished. Made by **Cleveland Crane & Engineering Co.,** Cleveland Tramrail Div., 1143 E. 283rd St., Wickliffe, O.

Mention Item NED-4260 when writing

Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 5/8" to 4 1/2" diameter through steel up to 1 1/8" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

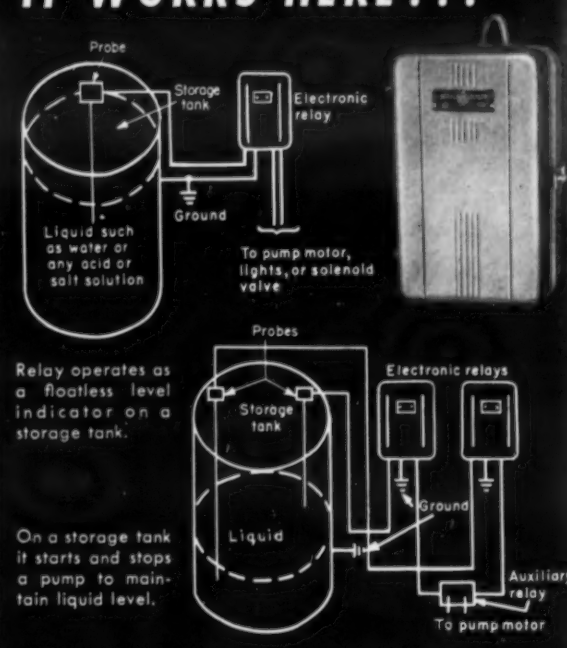
Write for Hole Saw Catalog Sheets.

MARVEL *Metal Cutting* SAWS
Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

Mention Item NED-4261 when writing

IT WORKS HERE . . .



what's YOUR problem?

This G-E ELECTRONIC RELAY counts, gages, tests conductivity of solutions, controls liquid level, detects breaks in threads—used wherever a power circuit must be controlled from a low-current or high-resistance contact. It operates with as much as 5 megohms in the actuating circuit and as little as 0.004-second contact time. Easily installed and serviced. Suitable for indoor or outdoor applications.

Diagrams are of a few industrial applications where this relay is being used. Bulletin GEA-4214A gives more details. Write now or contact the nearest G-E office. *Section J 730-4, Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

. . . AND HERE

Acts as a contact amplifier for delicate instruments. Because of the small amount of power required for operation, instrument contacts are not overloaded—do not weld or stick because of arcing.

G-E ELECTRONIC RELAYS

GENERAL ELECTRIC

Mention Item NED-4262 when writing

Gast's new booklet...
packed with Ideas for Product Designers

If you design machinery—or have a part in product development—you'll find this booklet a useful idea-source. It contains data on the use of *air* for many common—and uncommon—applications . . . plus 26 examples of product problems that were solved by putting air to work.

Sooner or later, "Air may be *your Answer*" on a product design problem. *Write on letterhead for your copy of "Application Ideas".*

GAST ROTARY — AIR MOTORS · COMPRESSORS · VACUUM PUMPS (TO ONE H.P.) (TO 35 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ Mention Item NED-4263 when writing ▲

Style 45D for All Dusts, and Mists.

Lung Savers That Save Safety Records

You'll find workers more willing to wear this respirator because of its light weight and comfortable fit. A single, easily replaceable filter protects workers in tunnelling and other dusty operations, and against mists such as encountered in paint spraying. The flexible, molded rubber facepiece fits snugly without danger of leakage. Approved by the U.S. Bureau of Mines.

For complete information on these products and their application, as well as many more eye and respiratory protective devices, get in touch with your nearest WILLSON distributor or write us.

Style 731 Chemical Cartridge Respirator approved for low concentrations of gases and vapors. *T.M.Reg.U.S.Pat.Off.

WILLSON Established 1870
WILLSON PRODUCTS, INC., 113 N. SECOND ST. • READING, PA.

▲ Mention Item NED-4264 when writing ▲

New *Milwaukee* Electric
SCREW-SHOOTER and NUT-SETTER
with ADJUSTABLE TORQUE CLUTCH

New-type, adjustable torque release clutch gives fast uniform tightening and speedy loosening of screws and nuts. The required amount of torque for any screw or nut within capacity of tool is assured.

Torque-release tension is adjusted by using ordinary screw driver. Torque transmitted to clutch through hardened steel balls, rolling in grease. No ratchets to strip—no more burred screw slots or stripped threads.

Clutch assembly can be taken apart without use of hand tools. Exclusive split-design motor housing enables inspection of all electrical parts and cleaning of commutator while motor is running.

CAPACITY
This great new tool will set 1/4" machine screws and 1/4" bolt-size nuts — drive up to and including No. 12-2" Wood or Self-Tapping screws.

Free spindle speed 650 rpm
Length over-all 8 3/4"
Spindle Offset 3/4"
Net Weight 4 lbs.

Price, $65.00
(Patent applied for)

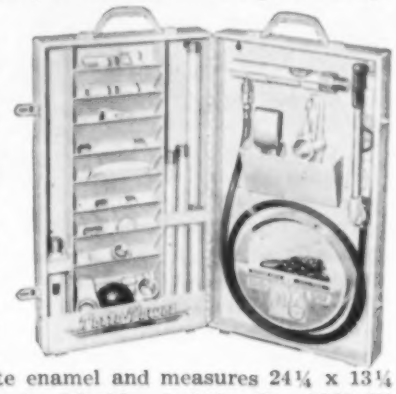
Milwaukee 1949 OUR SILVER ANNIVERSARY YEAR
QUALITY TOOLS

MILWAUKEE ELECTRIC TOOL CORP.
5320 W. State Street • Milwaukee 8, Wis.

▲ Mention Item NED-4265 when writing ▲

PORTABLE HYDRAULIC TOOL

Consisting of hand-operated hydraulic pump, Porto-Power hydraulic cylinder unit and numerous attachments in convenient wall case, SA-19 and SA-18 portable hydraulic tool assortments can be used for industrial lifting, pushing, pulling, bending and spreading applications. Case can be hung on wall above workbench, placed on floor next to job or positioned on portable workbench with all equipment quickly accessible.



It is finished in white enamel and measures 24 1/4 x 13 1/4 x 4 3/4 inches. Made by **Blackhawk Mfg. Co.,** 5325 W. Rogers St., Milwaukee 1, Wis.

▲ Mention Item NED-4266 when writing ▲

INFRARED DRYING UNIT

Containing six Nalco inside-aluminumed self-reflecting type lamps, this infrared portable heating and drying unit is designed especially for use in automotive, electrical and manufacturing fields. Mounted on four casters, units are adjustable in height from 18 inches to 6 feet. They can be tilted to any angle or swung in vertical or horizontal position for concentrated heating and drying. Units can be combined to form continuous banks for large area drying. Frame is of tubular steel. Made by **North American Electric Lamp Co.,** 1026 Tyler St., St. Louis, Mo.

▲ Mention Item NED-4267 when writing ▲

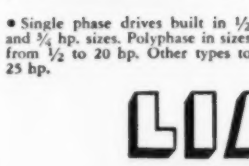
PIECEWORK CODE MARKERS

Expedient for determining total number of jobs completed and payment due, E-Z code markers provide means for tabulating piecework that greatly speeds payroll computing and reduces possibility of error. At start of each in-process job, small code card is provided which has attached to it numbered markers corresponding to number of operations for particular job. Upon completion, worker removes his designated self-adhesive marker from its backing card and applies it without moistening over one of the numbers on his job sheet. Card remains with job, and same procedure is followed at all subsequent stations. Typical form which is issued at beginning of work period will have space for worker's name, date, total job lots completed and total payment due. Code markers are coated fabric that resists dirt and constant handling and can be printed to any specification. Made by **Western Lithograph Co.,** 600 E. Second St., Los Angeles 54, Calif.

▲ Mention Item NED-4268 when writing ▲

Lima Gearshift Drives provide selective drilling speeds for Guibert Steel Company's TOGGLEBUG

The "TOGGLEBUG" drills structural steel—angles — channels — I beams—plates, etc. Manufactured by Guibert Steel Co., Pittsburgh, Pa.



• Single phase drives built in 1/2 and 3/4 hp. sizes. Polyphase in sizes from 1/2 to 20 hp. Other types to 25 hp.

LIMA GEARSHIFT DRIVES are built in sizes and ratings to provide "selective-speeds" for all types of machine tools. Lima Drives are also adaptable to a wide range of machinery of original equipment manufacture. We welcome inquiries regarding motorization problems. Write us today.

LIMA ELECTRIC MOTORS
Representation in principal cities
THE LIMA ELECTRIC MOTOR COMPANY
311 Findlay Road, Lima, Ohio

▲ Mention Item NED-4269 when writing ▲

THIS BOOK
tells you how to use overhead
to reduce overhead

May we send you Book 2330?

LINK-BELT COMPANY
2410 West 18th Street
Chicago 8, Ill.
Offices in Principal Cities

▲ Mention Item NED-4270 when writing ▲

"We Save About $5,000.00 A Year By Protecting Solenoids On Track Operated Switches"...

WITH:

"Formerly we tried to protect our track operated solenoids (drawing about 10 amp.) with 10 amp. fuses — but found them too large to prevent burning out of coils when fault currents below 10 amp. were applied continuously.

"In 1943, when we started to replace these fuses with 2 amp. Fusetron fuses, we found the time-lag of these fuses permitted them to hold current surges — yet they opened if the solenoid circuit failed to operate properly.

"Since protecting all of our solenoids with Fusetron fuses, we have reduced failures by 90%.

"Considering all factors this is saving us about $5,000.00 a year."

Ronald G. Thring, *Electrical Engineer*
Capital Transit Co., Washington, D. C.

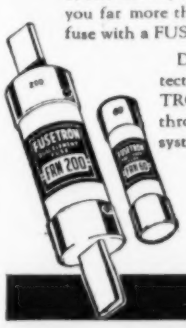
Fusetron DUAL-ELEMENT Fuses
AND THEIR
10-Point Protection

1. Protect against short-circuits.
2. Protect against needless blows caused by harmless overloads.
3. Protect against needless blows caused by excessive heating — lesser resistance results in cooler operation.
4. Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5. Protect motors against burnout from overloading.
6. Protect motors against burnout due to single phasing.
7. Give DOUBLE burnout protection to large motors — without extra cost.
8. Make protection of small motors simple and inexpensive.
9. Protect against waste of space and money — permit use of proper size switches and panels.
10. Protect coils, transformers and solenoids against burnouts.

Stop Wasting Time and Money —
FUSETRON Dual-Element FUSES
Give ALL-PURPOSE PROTECTION

One needless shutdown — or one lost motor — or one destroyed switch or panel — may cost you far more than replacing every ordinary fuse with a FUSETRON Dual-Element Fuse.

Don't risk such losses — protect yourself by installing FUSETRON Dual-Element Fuses throughout the entire electrical system.



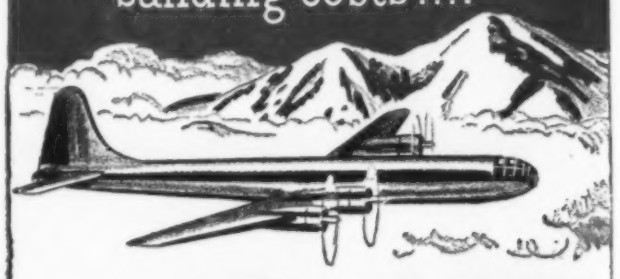
FUSETRON — TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION — BUSS

BUSSMANN MFG. CO.
(Division of McGraw Electric Co.)
University at Jefferson
St. Louis 7, Mo.

Sold Through Wholesalers

▲ Mention Item NED-4271 when writing ▲

Up in the air over sanding costs?...



...try JEWEL ABRASIVES

The sleek stainless steel skin used in large quantities for aircraft is finished faster, at less cost, with specially designed Jewel silicon carbide paper belts.

Aluminum alloy castings are finished more efficiently in a major aircraft plant with Silver Streak belts. Like all Jewel belts, they have AP's exclusive smooth-running Velvet Joint.

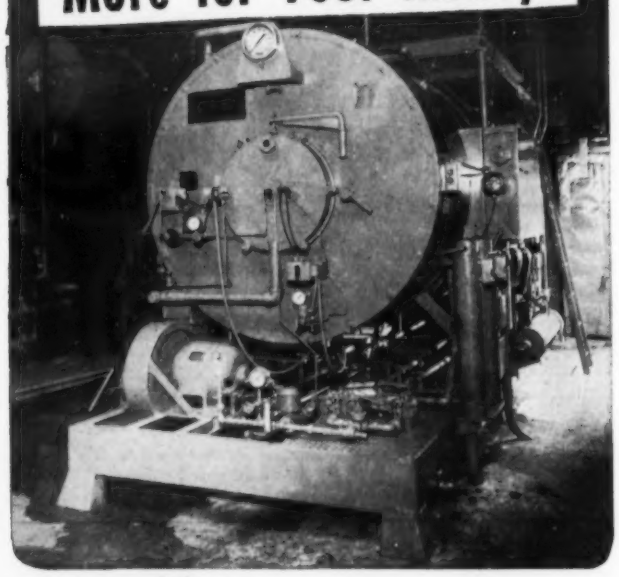
Remember, there's a Jewel product for every sanding, polishing and grinding need.

Abrasive Products, Inc.

SOUTH BRAINTREE 85, MASSACHUSETTS MAKERS OF JEWEL COATED ABRS

Mention Item NED-4275 when writing

You get ...
More for Your Money!



... with an

AMESTEAM GENERATOR

THAT'S RIGHT! — you get more for your money with an AMESTEAM Generator. Standard equipment for Units of over 15 lbs. design steam pressure includes:

Condensate Tank — **Feed Pump Unit**
Main Steam Valve — **Blow-off Valve**
Necessary Refractories — **Injector**
Insulation and Metal Jacket

You get everything you need except fuel tank, piping to boiler, wiring from power lines to boiler and a breeching or vent pipe.

Installation is simple. Just connect your steam, water, fuel and electric lines, and your breeching or vent pipe. Then — for full operating pressure in a few minutes — you merely press the starting button.

Standard Units are available from 10 HP to 300 HP, for pressures from 15 lbs. to 200 lbs., for firing with Oil, Gas or Oil-Gas Combinations. Why not look into the money-saving possibilities of AMESTEAM Generators?

SEND IN THE COUPON TODAY.

AMES IRON WORKS
Box 1506, Oswego, N. Y., U.S.A.

I would like to learn more about AMESTEAM Generators. Please send bulletin.

Name.....
Company.....
Address.....
City.....Zone.....State.....
Kind of business.....
Estimated capacity needed.....

AMES IRON WORKS Oswego, N.Y.
Builders of Better Boilers Since 1848

Mention Item NED-4276 when writing

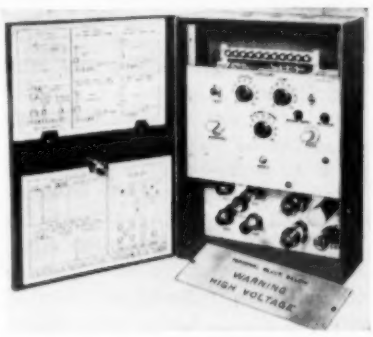
ELECTRONIC COMPARATOR

Accurate surface control of machined parts is afforded by Pico surface comparator which checks surfaces electronically against approved sample. It consists of meter, exploring head and adapter. By pressing head against surface being checked, touching actuating button and comparing meter reading and master reading, surface is checked in 5 seconds. Knife-edge meter pointer eliminates need for calculations or averaging.

Because it is simple, compact and portable, comparator can be used anywhere on production line, without special accessory equipment or specially skilled operators. It is contained in aluminum case having carrying handle and storage drawer and operates from any 110-volt 60-cycle current outlet. Made by **Merz Engineering Co.**, 200 S. Harding St., Indianapolis 7, Ind.

Mention Item NED-4277 when writing

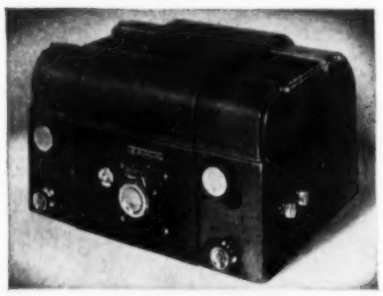
OVERLOAD CONTROL



By sensing slightly oversized stock 'pile-ups', dull punches, hard stock and other causes before damage occurs, model PN123 Protectron mechanical overload control prevents jamming in automatic feed presses and eyelet machines. In addition to affording protection to dies, it permits one operator to handle as many as four machines. This model will operate on normal operating loads of from 1 to 100 amperes, and with addition of small current transformer, it can handle loads above 100 amperes. Normal-load finder eliminates need of taking ammeter readings for setting unit when tool changes vary normal load. Unit supply voltages of either 110 or 220 volts can be handled by control, and it will operate on drive circuits of 110, 220, 440 and 550 volts, 60 cycles. Made by **Brinnell Co.**, Granby, Conn.

Mention Item NED-4278 when writing

BELT WET SURFACER

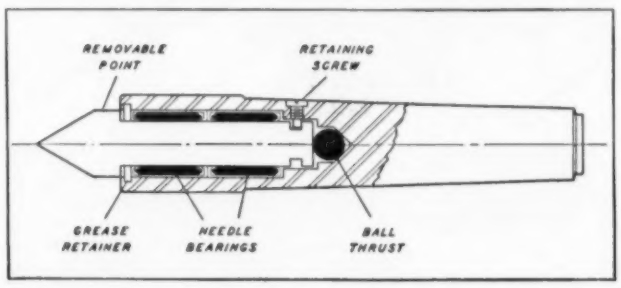


Usable for grinding tools, production parts and metallurgical specimens, No. 1251 AB Duo-Belt wet surfacer provides means for cooling both belt and work. It is powered to drive two belts simultaneously at either 1600 or 3200 feet per minute. Belts are cloth-backed silicon carbide with grits from 80 to 600 and are fabricated particularly for wet grinding with water or water soluble oils. Coolant is supplied to each belt independently and uniformly by valve controlled spray head. Coolant can be supplied directly from standard water lines or by use of AB recirculating system which is provided with series of slow motion spill-over type settling tanks which remove abraded residues. Made by **Buehler Ltd.**, 165 W. Wackers Dr., Chicago 1, Ill.

Mention Item NED-4279 when writing

SMALL HEAVY-DUTY CENTER

Though no larger than conventional stationary center, Wee needle bearing live center has ample capacity for heavy duty operations. Short overhang assures rigidity



High capacity needle bearings are grease packed for long service. Center is available in all Morse tapers and straight shanks and equipped with either 60-degree male or female tips as standard. Other tapers as well as pipe, ball and special points are available. Tips can be changed and bearings repacked by loosening retaining screw. Made by **Herbert Cross & Son**, Highland Ave. & Heather Rd., Bala-Cynwyd, Pa.

Mention Item NED-4280 when writing

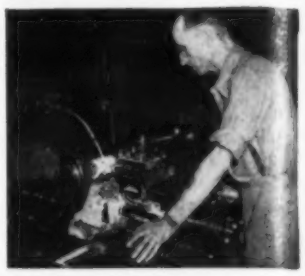
McCROSKY Turret TOOL POSTS

Increase Engine Lathe Usefulness

● McCrosky turret type tool posts permit the successive tools needed for multiple operation jobs to be swung into cutting position easily and accurately without stopping the machine.

Furnished in 5 styles for mounting in the T-slot of the compound rest, or the bolt circle of the main slide.

Endorsed by all well known lathe manufacturers.



Bulletin No. 17-T { Gives full details / Send for a copy

COST CUTTING TOOLS

McCROSKY TOOL CORPORATION MEADVILLE, PA.

Jack-Lock® MILLING CUTTERS
Adjustable BLADE REAMERS
Quick-Change CHUCKS
Turret TOOL POSTS
Block Type BORING BARS
SPECIAL *Multiple Operation* TOOLS

Mention Item NED-4281 when writing

IN HYDROTHERAPY TOO ...

Eastern

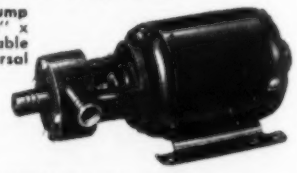
CENTRIFUGAL PUMPS ARE PROVING THEIR STAMINA!

1. Rocke Hydrotherapy Bath — Model 31 — utilizing the Eastern Model E-1 as a drain pump.

Among the hundreds of light industrial applications of Eastern Model E-1 Centrifugal Pumps, they are proving their stamina and ability to operate over long periods, in Rocke Hydrotherapy Equipment. Built for therapeutic application of vertical whirling aerated water, Rocke hydrotherapy baths are compact self-contained mobile units. Designed to provide a still further range of choice to those who require small pumps to operate over long periods, the Eastern Model E-1 is ideal for general purpose laboratory as well as light industrial uses.

Consult our engineers on the selection of the proper type of pump for specific applications; or write for our pump catalog.

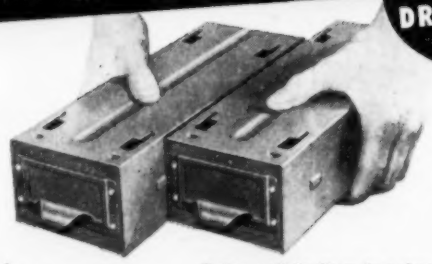
2. Eastern Model E-1 Centrifugal Pump
Specifications: Size: 7" x 3-3/8" x 3-9/16". Power: 1/15 h.p. available either 110 or 220 volts. Universal motor operates on A.C. or D.C.
Weight: 6 lbs.
Performance:
Max. Pressure: 18 PSI
Max. Capacity: 6-1/2 GPM



Eastern INDUSTRIES, INC.
296 ELM STREET, NEW HAVEN 6, CONN.

Mention Item NED-4282 when writing

SOLVE YOUR SMALL PARTS STORAGE PROBLEM WITH ALL-STEEL MULTI DRAWERS

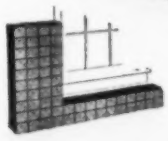


M-1212

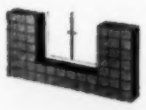
Easily assembled to fit any size or shape space.

Positive, Rigid Interlocking, Top, Bottom and Sides. Durable green finish.

TWO CONVENIENT SIZES
A New Low Price In Parts Cabinets



M-1212 (large drawer unit)—11 11/16" front to back, 3 15/16" wide, 3" deep—$1.29 each. Accommodates 5 drawer dividers—5c each—Part No. M-1213.



M-1010 (small drawer unit)—5" front to back, 2 7/8" wide, 2 1/4" deep—40c each. Accommodates 3 drawer dividers—2 for 5c—Part No. M-1011.

Rated Jobbers, Manufacturers—write for quantity discounts—makes an ideal package for small parts merchandise. Jobbers—some excellent territories still open, write immediately. Catalog sheets and literature.

Available through Mill Supply Houses; Wholesalers, Jobbers or write direct for nearest supplier.

MULTI DRAWER

THE CINCINNATI VENTILATING CO.
INCORPORATED
COVINGTON, KENTUCKY

Mention Item NED-4283 when writing

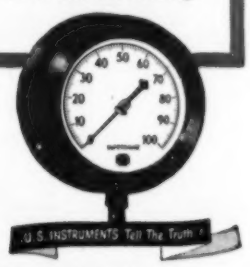
More OEM's Specify US Gauge Than Any Other Make

... Because USG Assures More Value

* ORIGINAL EQUIPMENT MANUFACTURERS

OEM'S know that US Instruments give more service, more accuracy, more value for the money. They know USG can supply all their needs for gauges measuring as low as 1" of mercury absolute, to gauges measuring up to 100,000 lbs. pressure per square inch. When ordering gauges, do as 6 out of 10 OEM'S do ... Specify US Gauge. Write for literature. United States Gauge, Division of American Machine and Metals, Inc., Sellersville 12, Penna.

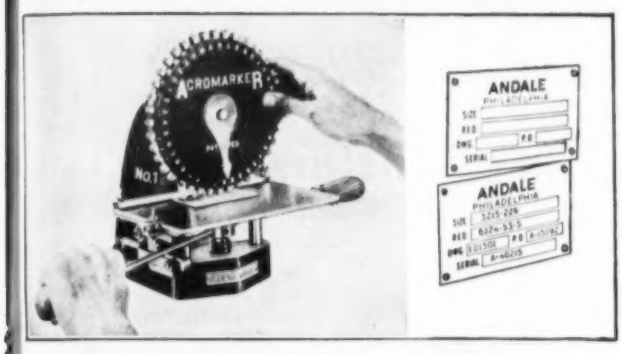
Pressure, Temperature, Flow and Electrical Measuring Instruments



USG UNITED STATES GAUGE

▲ Mention Item NED-4284 when writing ▲

FILLS IN NAME-PLATES—FAST



THE ACROMARKER NAME-PLATE STAMPING MACHINE

PROVIDES THE FAST, ACCURATE WAY OF FILLING IN VOLTAGES, SERIAL NUMBERS etc.

MADE BY THE MAKERS OF—

MARKING AND NUMBERING MACHINES, STAMPS, DIES, TYPE, NAME PLATES, METAL SIGNS, ENGRAVING, BURNING BRANDS, MARKING INKS AND SPECIAL MACHINES FOR ALL KINDS OF MARKING.

ORDER DIRECT OR FROM YOUR LOCAL DEALER

The ACROMARK Company

7-11 MORRELL ST. ELIZABETH 4, N. J.

"THE ORIGINAL MARKING SPECIALISTS"

▲ Mention Item NED-4285 when writing ▲

Free BOOKLET ON INVINCIBLE Flux Recovery Systems

• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unfused flux on submerged arc welding jobs. Invincibles operate more rapidly and far better than any manual method. Also, by eliminating fine dust ("flour") from the salvaged flux, they reduce welding rejects. Invincible Units are compact, easily installed and able to withstand continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

▲ Mention Item NED-4286 when writing ▲

CONDENSER TUBE EXPANDER

Capable of precision work even when operated by inexperienced user, Dudley electronic control tube expander automatically turns off expanding motor at values predetermined for each size and gage of tube. Result is uniform minimum amount of expansion on all tubes regardless of tube tolerance and tube sheet hole size variations.

Equipment consists of electronic precision tube expander control, automatic voltage regulator, electric expander driving motor and precision tube expander. It incorporates ball-bearing stop collar which remains stationary when in contact with tube end and transmits thrust load to ball bearings contained in housing, thus eliminating tube end cutting and frictional heating. Through control, motor operates on 115-volt 60-cycle current; and complete with cable, unit weighs 7 pounds. Made by **Crane Packing Co.**, 1816 W. Cuyler Ave., Chicago 13, Ill.

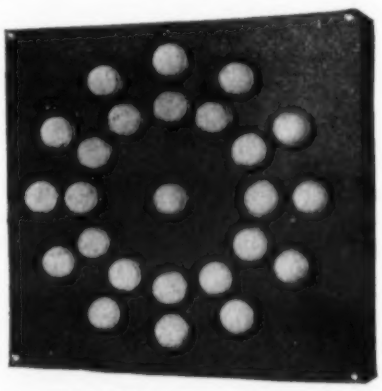
▲ Mention Item NED-4287 when writing ▲

UTILITY BUILDING

Designed for use as warehouse, garage or workshop, this aluminum building is easily erected and can be bolted in series to other units. It is available in widths of 12 and 16 feet and in 16, 18, and 20-foot lengths. Made by **Howard Welded Buildings Inc.**, 1014 S. Dittmer St., Davenport, Iowa.

▲ Mention Item NED-4288 when writing ▲

VISUAL PAGING SYSTEM



Simple and unique in that no numbers are required, Kirkland Visicall system is silent visual type of paging service for installations where audible signals and loud speakers cannot be heard or are objectionable. Circles of lights are arranged as numbers of clock, with center light as hub of invisible radial lines to hour positions. Additional circles of lamp units can be placed at hour positions, with each circle of different color, thus allowing call space for 48 persons. Chief feature of this system is that more than one person can be paged at same time. System operates on 24-volt transformer with bulbs consuming up to 0.2-ampere. It is available in four sizes to call 12, 24, 36, or 48 persons and in flush, surface mounting, or double-face types. Made by **H. R. Kirkland Co.**, 810 King St., Morristown, N. J.

▲ Mention Item NED-4289 when writing ▲

"COMMERCIAL"

OBROUND HEADS

For oil burner tanks

275 gallons capacity

"Commercial" obround heads are formed cold in dies; each head of the same size and style fits exactly

Surfaces are smooth and flanges free from wrinkles

"Commercial" obround heads can be furnished in double dished, parabolic, flanged and dished, flat flanged and in three different sizes.

Pipe support lugs also available.

THE COMMERCIAL SHEARING AND STAMPING COMPANY.
YOUNGSTOWN · 1 · OHIO · U.S.A.

▲ Mention Item NED-4290 when writing ▲

If you manufacture electronic equipment

General Electric is now offering to other manufacturers the cast glass bushings it has used so successfully on many types of electrical equipment.

These bushings are cast of a stable, low-expansion glass. Metal hardware is a special nickel-alloy steel, fused to the glass in casting. Bushings can be attached directly to the apparatus without gaskets—by soldering, welding or brazing.

Our new bulletin, GEA-5093, contains a complete listing of standard designs now available—giving withstand voltages, current ratings and physical dimensions. A copy of this bulletin is yours for the asking. Just write *Apparatus Department, General Electric Co., Schenectady 5, N. Y.*

GENERAL ELECTRIC

401-88

▲ Mention Item NED-4291 when writing ▲

Get BETTER PRODUCTS, LONGER TOOL and DIE LIFE with PANGBORN "Hydro-Finish"

PANGBORN HYDRO-FINISH cuts cleaning, polishing, buffing costs to the bone! Eliminates many hand operations, produces a clean surface *faster* than by any other method. Uses fine mesh abrasives suspended in water and holds tolerances to .0001!

BETTER PRODUCTS . . . With Hydro-Finish on your production line, surfaces hold electro-plating better, resist peeling and chipping. *Hydro-Finish* forms a "tooth" for better bonding of rubber, paint, plastics, etc. Makes threaded pieces turn easily . . . forms little oil pockets in lubricated pieces for longer wear. Eliminates burrs in machined parts and removes or blends grinding lines to reduce fatigue failure!

LONGER TOOL AND DIE LIFE . . . Jobs that formerly took hours are done *in minutes* with Hydro-Finish! You clean and improve surface of plastic and die casting dies, rubber and glass molds, forging dies, forming and deep drawing dies, without excessive metal removal. Dies are clean, produce maximum production . . . all without expensive hand maintenance!

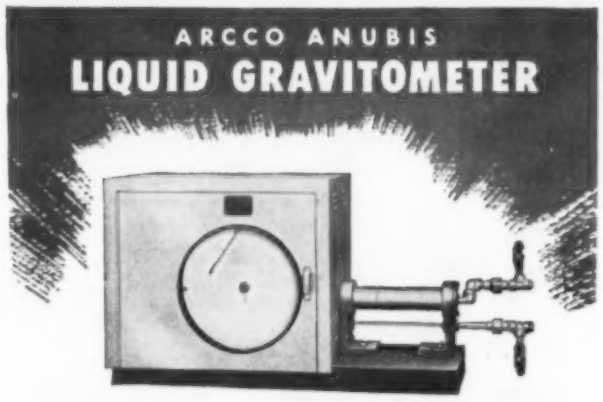
GET THE FACTS: Write today for Bulletin 1400 and learn how Pangborn Hydro-Finish can help you! Address: PANGBORN CORPORATION, 1294 PANGBORN BLVD., HAGERSTOWN, MARYLAND.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control Equipment.

Pangborn
BLAST CLEANS CHEAPER
with the right equipment for every job

▲ Mention Item NED-4292 when writing ▲

ARCCO ANUBIS
LIQUID GRAVITOMETER



...for PIPELINES, REFINERIES, GASOLINE PLANTS

This ruggedly built instrument of laboratory accuracy is ideal for quick checking and for continuous recording of Specific Gravity of liquids under line pressure. Changes in Specific Gravity of sample are recorded with a very minimum of time lag. Foreign liquids and gases are automatically purged from sample. No moving joints or stuffing boxes to cause friction or leakage. Temperature corrected, this precision instrument is adaptable to high pressures. Hundreds are in daily use in plants and refineries of major companies. Also available as a controlling instrument. Send for bulletin No. 111A.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Available for Early Delivery

Mention Item NED-4293 when writing

The trained hand of Hassall offers you:

Hassall
ESTABLISHED 1850

HASSALL cold-heading may solve your immediate special part problem...Special nails, rivets and threaded parts made in diameters from 1/32" to 3/8"—lengths up to 7"...Rivets 3/32" diameter and smaller a specialty...also small threaded blanks...Variety of metals, finishes and secondary operations...Economy, quality and quick delivery in large or small quantities...Your inquiries answered promptly...ASK FOR FREE CATALOG...3-color DECIMAL EQUIVALENTS WALL CHART free on request.

JOHN HASSALL, INC. 398 OAKLAND ST. BROOKLYN 22, N. Y.

Manufacturers of Cold-Headed Specialties—Established 1850

Mention Item NED-4294 when writing

Speed Sweep

THE BRUSH WITH THE STEEL BACK

Sweeps Cleaner, Faster, Easier
Outlasts Ordinary Brushes 3 to 1

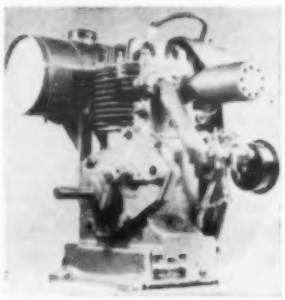
Here is the one and only brush that is specially designed to do a more thorough sweeping job with less effort. It is also the only brush that is constructed to outlast ordinary brushes. Send coupon today for complete information and prices. *Milwaukee Dustless Brush Co., Milwaukee 3, Wis.*

There's a style and size of Speed Sweep for every sweeping need.

Milwaukee Dustless Brush Co.
530 N. 22nd St. • Milwaukee 3, Wisconsin
Send complete facts about Speed Sweep brushes.
NAME _____
ADDRESS _____
CITY _____ STATE _____

Mention Item NED-4295 when writing

SMALL GASOLINE ENGINE

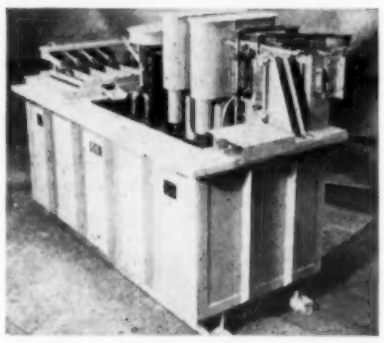


Originally developed for powering Cushman motor scooters, Husky air-cooled gasoline engines are now available for use as basic power units for all types of commercial and industrial equipment requiring four-cycle single-cylinder engine, clutch and transmission. Model M6 is rated 1.5-3.0 horsepower; model M7, 2.3-4.6 horsepower; and model M8, 2.8-5.2 horsepower. They can be supplied to operate in either direction of rotation and feature adjustable-taper main roller bearings, automotive precision type connecting rod bearings, adjustable flyweight type fully-enclosed governor and high voltage magneto. Rope or kick starter can be furnished.

Manual positive-action, automatic and disk type clutches; transmissions with forward and reverse gears; and other accessories are available. Standard equipment includes dry type air cleaner, cylindrical muffler, 1-gallon fuel tank, bowl type gasoline strainer and Tillotson float feed carburetor. Made by **Cushman Motor Works, Inc.,** Lincoln 1, Nebr.

Mention Item NED-4296 when writing

ISOTHERMAL FURNACE



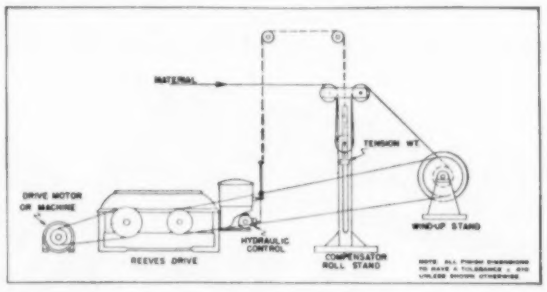
Attaining hardness equal to that produced by oil quenching, together with usual benefits of martempering and austempering, is possible with this isothermal quench furnace. It assures rapid and uniform cooling of work and provides positive method of extracting high temperature chloride salts carried over from austenitizing bath. Submerged pumps circulate molten salt in headers into which hot work is introduced to concentrate relatively large volume of salt in confined quenching area.

Removal of chloride contamination is accomplished by motor driven pump which lifts salt from quench bath to trough arranged above separate steel separation tank built into one end of unit. Trough is cooled constantly by blast of air which chills salt to separating temperature which is always below operating temperature of bath. Contaminant is precipitated out of solution and collected in wire mesh filter baskets, while purified nitrate salt enters separation chamber from where it flows back into bath. Made by **Ajax Electric Co.,** Frankford Ave. at Delaware Ave., Philadelphia 23, Pa.

Mention Item NED-4297 when writing

VARIABLE SPEED UNIT

Providing constant tension and control of velocity in web material, keeping machines in synchronism or maintaining uniform tension of goods between two ma-



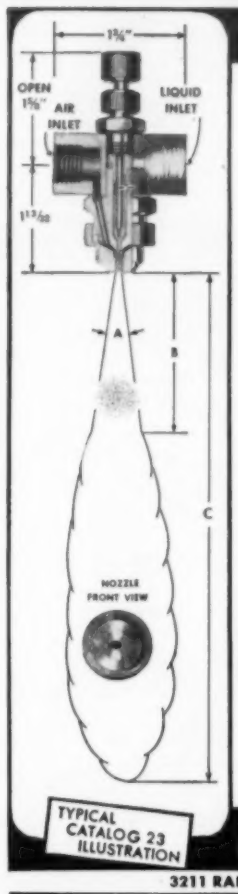
chines or two sections of same machine is possible with this sensitive hydraulically controlled variable speed unit used in conjunction with floating roll mechanism. Material such as cloth, rope, wire or paper delivered from one machine passes over fixed roll, under floating roll, over second fixed roll and into next machine or wind-up drum. Floating roll is connected to speed control lever of speed unit.

Schematic diagram illustrates setup of floating roll and speed control which was used to solve wind-up problem in printing industry and is typical of applications in textile industry or other processing plants where material must be rewound on wind-up stand. Illustration shows only wind-up end, but identical setup at unwind or delivery end places material under constant tension and provides solution to many production problems.

Floating roll in illustration continually compensates for changes in diameter of material as it builds up on wind-up roll with resulting action of continuous shifting of hydraulc control to decrease output speed of variable speed drive. Thus, speed of wind-up drum is continually decreased as material builds up in diameter to assure constant tension and velocity on web throughout complete process. Made by **Reeves Pulley Co.,** 1000 N. Wilson St., Columbus, Ind.

Mention Item NED-4298 when writing

SPRAYING SYSTEMS



PNEUMATIC ATOMIZING NOZZLES

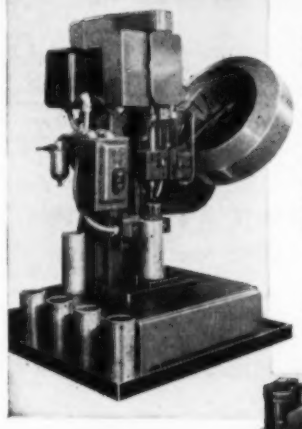
The most complete selection of pneumatic atomizing nozzles ever produced for industry is now available to you. Designed and manufactured by Spraying Systems Co., you can now obtain pneumatic atomizing nozzles to meet your needs exactly in capacity, spray type and spray characteristics. Catalog 23 gives complete information.

Write for Catalog 23

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3211 RANDOLPH ST. • BELLWOOD, ILL. (Suburb of Chicago)

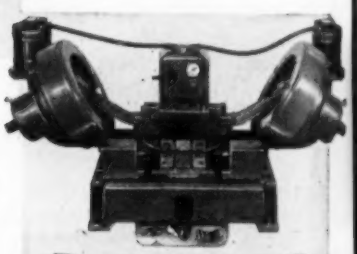
Mention Item NED-4299 when writing

Yes! WE DO MAKE Special ASSEMBLING MACHINES

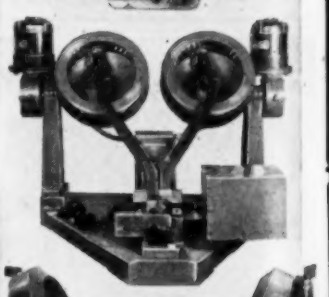


Motorized Hopper Units by the Detroit Power Screwdriver Company are "tailor-made" for special assembling applications . . . They eliminate the manual handling of parts . . . Let us solve your production assembling problem . . . Contact us now; send special assembly and component parts for quotation.

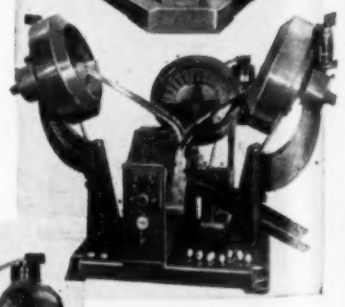
Pressing terminal studs in dry cell batteries.



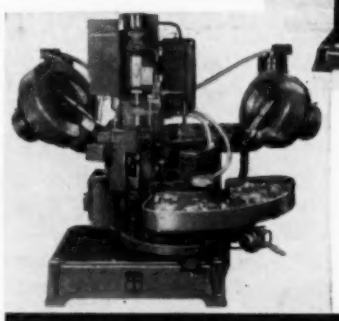
Assembling small hardware hinges by inserting two hinge pins simultaneously.



Inserting mounting screws in cooking utensil handles.



Automatic assembly of toy plastic wheels and axles.

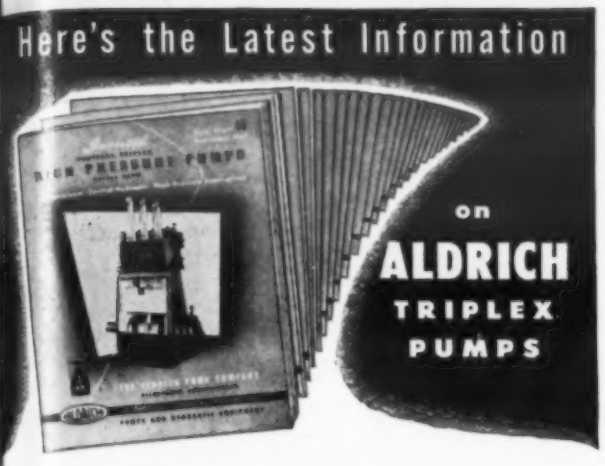


Assembling screw and fibre washer to cable clamp for electrical outlet box for shipping purposes.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. • DETROIT 16, MICH.

Mention Item NED-4300 when writing

Here's the Latest Information



It pays to keep up-to-date on the latest developments in high pressure pumps—and here's an excellent way to do it. Just write for your copy of new Aldrich Data Sheet 66.

It completely pictures and describes the Aldrich Inverted Vertical Triplex Pump—gives standard ratings, approximate dimensions and diagrams of comparative discharge flows. The Data Sheet describes the construction and operation of the pump and points out its low maintenance features. Cross-section drawings and various charts illustrate primary advantages.

You can get your free copy, now. Just write to—

THE ALDRICH PUMP COMPANY
4 Gordon Street • Allentown, Pa.

ALDRICH THE First NAME IN INVERTED RECIPROCATING PUMPS

Mention Item NED-4301 when writing

The Higher the Pressure ...the Tighter the Valve

On hydraulic presses of all types this Yarway Hydraulic Valve will give long life with minimum maintenance. Automatically regrinds its own sealing surfaces. Small and compact. Easy to install and operate.

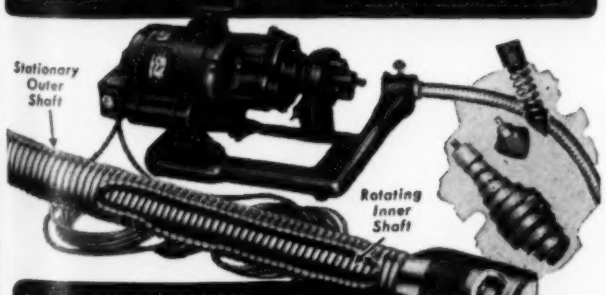
Yarway Single-Pressure Hydraulic Valves are made in straightway, three-way and four-way types; in five sizes for pressures up to 5000 lbs. Also Yarway Two-Pressure Valves in two sizes for pressures up to 4000 lbs. Write for Bulletin H-209.

YARNALL-WARING CO.
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY
Improved Type
HYDRAULIC VALVE

Mention Item NED-4302 when writing

Electric Eel cleans sewers and drains with SAFETY



New DOUBLE CABLE protects operator. Speedy, more efficient. Flexible Outer Sheath for Safety

Most Powerful Machine of its Type

- Full Electric Reverse for Rapid Withdrawal
- Increased Speed Through Greater R.P.M.
- Lighter Due to New Aluminum Frame
- Rotating Inner Cables
- Lines 1¼" to 8" Diameter
- Runs up to 200 Ft.
- Over 6,000 in Use
- 10 Years in Production
- Each Tool Engineered for a Particular Purpose

Knives and tools are available for any pipe cleaning job.

Write for more information. Dept. NED

OHIO TOOL & ENGINEERING CO., Springfield, Ohio

Mention Item NED-4303 when writing

ADJUSTABLE WRENCHES

Made in 4, 6, 8, 10, 12, 15 and 18-inch sizes with maximum capacities from ½ to 2-1/16 inches, carbon steel adjustable wrenches are drop forged from selected steel accurately heat treated for uniform strength. Design of square shoulders on shank portion of sliding jaw provides maximum and positive bearing against working stress. Wedging and spreading action is eliminated. Made by **J. H. Williams & Co.**, Dept. NED-6, 400 Vulcan St., Buffalo 7, N. Y.

Mention Item NED-4304 when writing

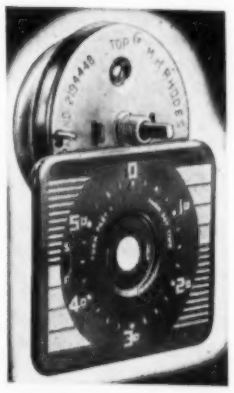
RUBBER HARDNESS GAGE

Of convenient size for carrying in pocket, rubber hardness gage measures hardness of rubbers and other elastomers from 15 to 95 Shore Sceleroscope. Each unit

is supplied with test block of known hardness. Gage is pressed against sample to be measured and reading taken from scale. Finish is of hard polished chromium, and device has but one moving part. Made by **Clarkstan Corp.**, 11927-J W. Pico Blvd., Los Angeles 34, Calif.

Mention Item NED-4305 when writing

TWO-SPEED TIMER



Usable for either 60 or 6-minute timing interval, Mark-Time two-speed timer is designed for incorporation into ranges, electrical appliances and industrial equipment. Utilizing center-stud mounting, timer and its dial are secured to panel with single washer and nut. Unit measures 2-11/16 inches in diameter and 1⅜ inches in depth behind panel. Full 360-degree sweep of dial is employed for both 6 and 60-minute timing. Each dial is divided into six major divisions, numerals of which feature large first digit and small zero to indicate 1 minute on 6-minute operation and 10 minutes when on 60-minute cycle. On both timing cycles, bell tone signal marks end of time period. Although standard timings for unit are those given above, other special timings can be supplied provided they retain 10:1 ratio. Made by **M. H. Rhodes, Inc.**, 28 Bartholomew Ave., Hartford, Conn.

Mention Item NED-4306 when writing

Identical Twins...
BORN MONTHS APART
Truflex Thermostat Metals

When you buy General Plate Truflex Thermostat Metal you can be sure that not only the first lot meets specifications but every succeeding order is a twin . . . has identical characteristics to the original lot . . . whether it be days, months or years apart.

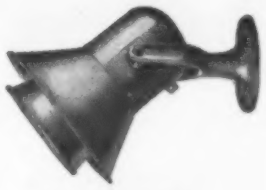
Advanced General Plate production methods insure positive consistency in tolerances, grain structures, expansion, hardness, etc. It assures maximum uniformity of materials which reduces costly rejects and guarantees highest quality performances.

General Plate Truflex Thermostat Metal is available in many types for all temperature requirements. It is made in sheet, strips, coils or in fabricated parts to your specifications ready for installation into your products. Mail coupon for complete information or write for engineering assistance.

GENERAL PLATE
Division of Metals and Controls Corporation
806 FOREST STREET, ATTLEBORO, MASS.

Mention Item NED-4307 when writing

FEDERAL



SIRENS

HORNS

BELLS

For all industrial applications; shops, yards, warehouses and structures.

Heavy-duty, precision-built, weather-proof signals for warning, alarm, paging, come-on and other signalling purposes.

Get in touch with Federal for reliable signalling equipment. Federal, the oldest and largest signal manufacturer, builds precision signals for longer life in heavy duty use.

Write for Industrial Signal Catalogue

FEDERAL ENTERPRISES, INC.
formerly FEDERAL ELECTRIC COMPANY, INC.
8711 South State Street Chicago 19, Illinois

Mention Item NED-4308 when writing

IMPORTANT! When Ordering Motorized Hand Truck Equipment

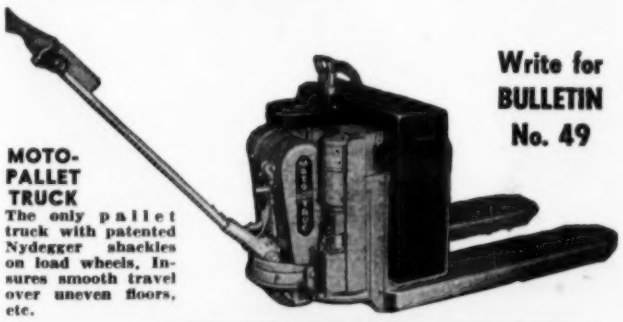
MAKE SURE YOU CHOOSE THE TRUCK WITH SHORTEST OVERALL LENGTH and Easiest Control... that's MOTO-TRUC

Make sure you get the truck that's up to 15" shorter, turns in smaller radius, made to handle any size and type of pallet — that's MOTO-TRUC.

Make sure you get the truck that's easiest to manipulate. All controls in roller handle, within finger tip reach —that's MOTO-TRUC.

Make sure you get the safest truck. Lower line of gravity to prevent tipping and dependable dead man controls—that's MOTO-TRUC.

Make sure you get the truck with power unit which is most easily and quickly accessible for inspection and servicing—that's MOTO-TRUC.



Write for BULLETIN No. 49

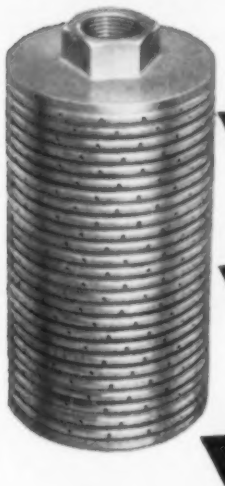
MOTO-PALLET TRUCK
The only pallet truck with patented Nydegger shackles on load wheels. Insures smooth travel over uneven floors, etc.

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

Mention Item NED-4309 when writing

New GENERAL FILTER

for Hydraulic and Lubricating Oils



NO CARTRIDGES TO REPLACE

There are no expensive cartridges to throw away or stock. Entire unit is cleanable. First cost is only cost.

EASY TO CLEAN

Just remove one nut and all spacers and screens slide off. Wash in suitable solvent and replace. It's as simple as that.

FILTRATION TO SUIT EVERY APPLICATION

Write! for prices and specifications. Describe your application.

This Model 1300 GENERAL FILTER can be made to filter solids from .040 inch to 5 microns by varying the mesh of the filtering screens. Comes in two standard lengths, 8 inches and 4 inches, but can be made any length to provide capacity between 5 and 50 gallons per minute.

GENERAL FILTERS, Inc.
12890 WESTWOOD — DETROIT 23, MICH.

Mention Item NED-4313 when writing

AO R-2000 Respirator

Not Double, not Triple, but 40 Times Greater Efficiency!

WITH

Compact, Chemically Treated Filter

In filtering out dusts (even dusts as small as 24 millionths of an inch) the R-2000 does 40 times the job of respirators with similar untreated filters. Because its disposable filter is as efficient as previous filters 8 times as large, a far smaller filter container suffices. Hence, wearers obtain unusual comfort and the maximum in unobstructed front and side vision. QUICK FACTS: Face mask molded from highest quality, pliable rubber with rounded edges for comfortable, positive seal on any face without adjustment. Positive action inhalation valve admits air at lightest intake of breath. Dust-proof exhalation valve expels air completely with maximum drainage, minimum resistance. Respirator is easily disassembled, cleaned and reassembled. No special tools required. Approved by the U.S. Bureau of Mines. Order from your nearest AO Safety Products Representative.

American Optical COMPANY
Safety Products Division

Southbridge, Massachusetts • Branches in Principal Cities

Mention Item NED-4314 when writing

new sander

PORTABLE ELECTRIC

STERLING **century** SANDER

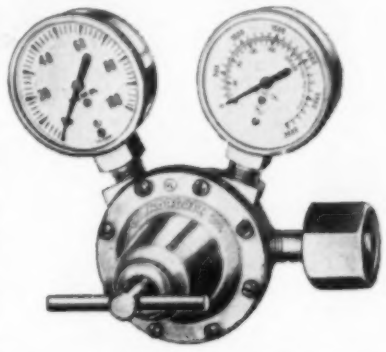
Easiest-to-use, fastest, safest sander . . . the new low cost Sterling Century! Uniformly sands wood, metal and composition—flat or curved surfaces. Only 4 inches high—pad speed 5000 r.p.m. Uses ½ standard abrasive sheet. Powerful, durable, built for long, continuous use! Send coupon for catalog.

STERLING STP PRODUCTS CO.
STERLING TOOL PRODUCTS CO.
1336-C Milwaukee Ave., Chicago 22, Illinois
Canada: Terminal Warehouse, Dept. 27, Toronto 1
Send folder on New Sterling Century Sander

FIRM NAME
ATTENTION
STREET CITY STATE

Mention Item NED-4315 when writing

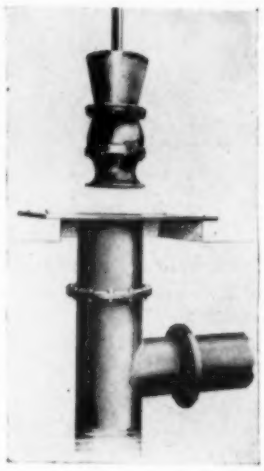
WELDING REGULATORS



Of yoke type for maximum safety, single-stage welding regulators for oxygen and acetylene assure positive delivery of these gases at correct pressures without creep and hold secondary pressure as tank pressure falls. Ball-pivoting lower spring rest assures permanently friction-free operation. O-rings, between yoke and diaphragm and between body and bonnet, seal and cushion diaphragm for maximum performance. Each model is furnished complete with primary and secondary pressure gages and standard tank connection and can be dismantled easily and completely without removal from cylinder. Regulators are listed by Underwriters' Laboratories, Inc. Made by **C. A. Norgren Co.**, 222 Santa Fe Dr., Denver 9, Colo.

Mention Item NED-4316 when writing

AXIAL FLOW PUMPS



Applicable to power plant condenser circulation and other continuous operations where it is desirable to disengage all working parts for periodic inspection without breaking pipe or mounting connections, Pull-Out pumps can be obtained in either axial or mixed flow types. Suction bell, impeller, impeller housing, shaft, motor base and motor can be removed without disturbing column and discharge elbow. These pumps are advantageous when discharge elbow is below floor level or when pit in which pump is installed is not easily drained. Pumps are supplied in either cast or welded construction and of alloy materials if specified. They are available in sizes up to 100,000 gallons per minute. Made by **Economy Pumps, Inc.**, Hamilton, O.

Mention Item NED-4317 when writing

TENSION TESTING SCALE

For measuring small torques, spring tension, contact breaker arm tension, mechanical mass and balancing roller or platen tensions, improved model Push or Pull scale replaces old single-action type. Scale can be inserted into small openings without removing installed units or parts for accurate measuring of tension in pounds and ounces. Rods are 6 inches long threaded and detachable, spring is alloy steel wire, and shell is seamless brass tubing with solid brass head. Entire scale is nickel plated. Scales are available in three sizes: model 2-T with capacity of 2 pounds graduated by ¼-ounce; model 5-T with capacity of 5 pounds graduated by 1 ounce; and model 20-T with capacity of 20 pounds graduated by 4 ounces. Made by **Pelouze Mfg. Co.**, 1236 Chicago Ave., Evanston, Ill.

Mention Item NED-4318 when writing

TROLLEY TAPS

Using threaded stud on Fusetron or fuse instead of ferrule type connection, trolley taps and cable protectors make almost solid connection between hook end fuse holder and cable end fuse holder thereby eliminating burning of fuse. Threaded stud connection also increases strength of entire trolley tap. Both trolley taps and cable protectors are enclosed in heavy Micarta tubing, and trolley taps also have heavy fiber guards just below hook. Made by **Mosebach Electric & Supply Co.**, 1162 Arlington Ave., Pittsburgh 3, Pa.

Mention Item NED-4319 when writing

I've Discovered a Low Cost Steel Building that's Better YET SAVES MONEY 5* WAYS!

*
1 Standardized, Yet Extremely Flexible to Meet Your Specific Requirements!
2 Heavy Construction . . . Meets Local Building Codes!
3 Permanent, Yet Easily Erected!
4 Multiple Widths—Any Length!
5 Ready for Delivery NOW!

For additional, quickly-erected storage and production space . . . STEELCRAFT Standardized Structural Parts and Sections! Add to existing buildings, combine with architecturally designed structures, use as separate, complete building units! Choice of many types of wall and roof panels . . . optional construction features . . . for adaptability to any type of occupancy!

Write Today—or Have Your Architect, Engineer, or Contractor Consult Us for Complete Information . . . No Obligation.

STEELCRAFT MANUFACTURING COMPANY
DEPT. 9159 Rossmoyne, Ohio (in Greater Cincinnati)

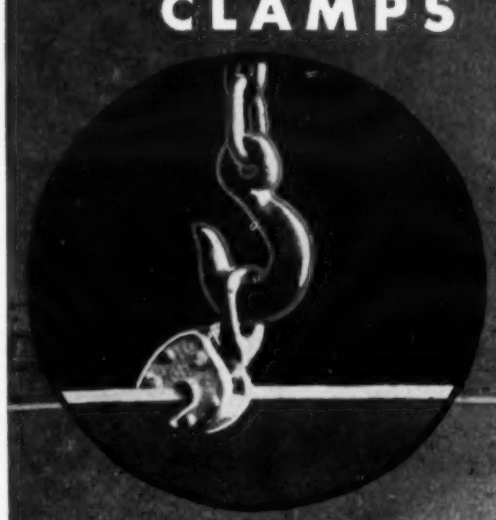
STEEL Craft REG. U.S. PAT. OFF.

Mention Item NED-4320 when writing

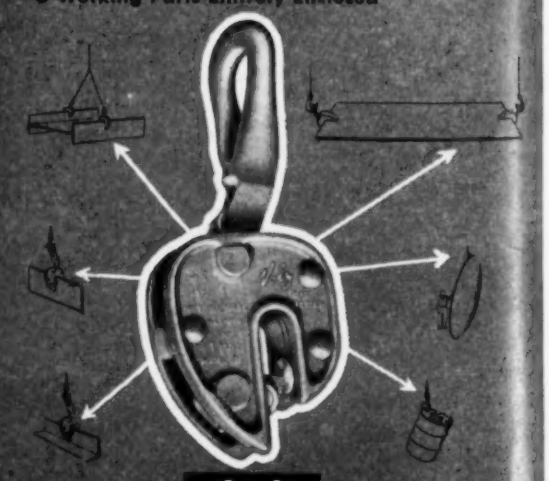
CONVEY IT FASTER, SAFER, MORE ECONOMICALLY

with

MERRILL Volz CLAMPS



The HEAVIER the LOAD—the TIGHTER the GRIP!
- Drop Forged and Heat Treated
- Cam and Pads of Case Hardened Tool Steel
- Safety Factor—5 to 1
- Factory Tested at Double Rated Capacity
- Working Parts Entirely Enclosed



MERRILL MB BROTHERS

56-13 Arnold Ave., Maspeth, N. Y.

FINE FORGINGS SINCE 1866

Mention Item NED-4321 when writing

Republic...
MECHANICAL RUBBER GOODS

• Cost-conscious, quality-producing manufacturers have long depended on Republic Rubber Division for hose, belting, and all kinds of molded, extruded and lathe-cut goods. Republic makes these items in various shapes, sizes, and weights . . . built to your exact specifications. And hose and belting applicators often find that Republic's standard products are exactly right for their specialized requirements.

Send us your product specifications today, or let us develop new ones for you. A phone call or letter will bring you complete, valuable information.

REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation · 1410 Albert Street · Youngstown, Ohio
Lee Deluxe Tires & Tubes · · · Conshohocken, Penna.

▲ Mention Item NED-4322 when writing ▲

FASTER and MORE ECONOMICAL
EXTINGUISHMENT of GASOLINE FIRES
using ROCKWOOD FogFOAM

Whip gasoline fires with Rockwood's new Type FFF FogFOAM Nozzles and Rockwood Foam Liquid. They offer several remarkable advantages over old style, slow-acting powder type foam and any other type of liquid foam equipment now on the market.

Write for literature giving more details.

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

▲ Mention Item NED-4323 when writing ▲

For Safety's Sake Use
DAYTON SAFETY LADDERS

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

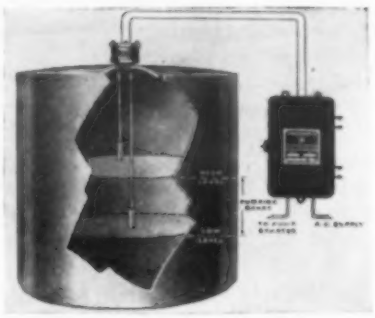
Sizes 3 feet to 16 feet in height with standard rubber safety shoes at no extra cost.

Write today for Bulletin No. 10

DAYTON SAFETY LADDER CO.
2339 GILBERT AVE. CINCINNATI, OHIO
In Canada—Safety Supply Company—Toronto

▲ Mention Item NED-4324 when writing ▲

LIQUID LEVEL CONTROL



Consisting of electrical relay operating from probe circuit through transformer and rectifier, series 10 level control can be used for automatically regulating level of electrically conductive liquids such as acids, salts, milk, beer, nitrates and sulphates. As indicated in sketch, two probe rods which are wired to control project into tank to levels corresponding to low point where pumping is to start and high point where pumping is to stop. When level of liquid in tank falls below lower probe, level control closes electrical circuit to actuate pump or valve. When liquid rises to level of upper probe, fluid acts as conductor of minute current at low voltage required for operation of relay, and central circuit opens. Made by **Photoswitch Inc.**, 77-89 Broadway, Cambridge 42, Mass.

▲ Mention Item NED-4325 when writing ▲

FREE-MACHINING STEEL

Capable of being machined 10 to 25 per cent faster than company's standard free-machining Bessemer screw steel, "E" free-machining steel can now be furnished in cold-finished bars as stock from which to make nuts, screws, studs, fittings and other machined products. Machinability index 135 of standard free-cutting B-1113 Bessemer steel is surpassed by "E" steel with index of 170. Thorough testing has indicated that this improved steel has smoother finish after machining, better cold working and cold forming properties, and gives longer tool life on screw machines than its predecessor. Made by **Jones & Laughlin Steel Corp.**, 611-311 Ross St., Pittsburgh 30, Pa.

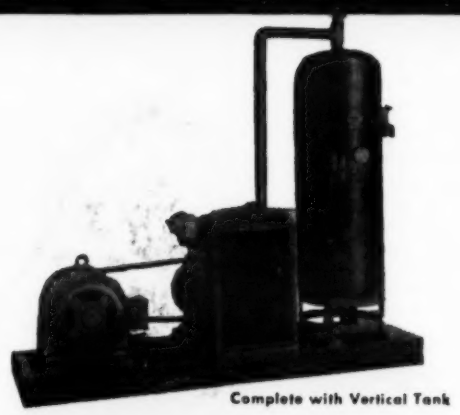
▲ Mention Item NED-4326 when writing ▲

FORK-LIFT TRUCK

Redesigned for improved appearance Trucloader 1000-pound-capacity fork-lift truck also incorporates improved steering, easier control and greater accessibility to engine compartment. Steering column has been moved forward to provide more leg room, and lift and tilt levers have been relocated in same position as on other models in line. Floor plates can be removed easily, and hinged louvers on either side of engine compartment make engine more accessible. Gas tank is now attached to rear of frame and is partially enclosed by counterweight having rounded contour. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ Mention Item NED-4327 when writing ▲

SCHRAMM
AIR COMPRESSORS



Complete with Vertical Tank

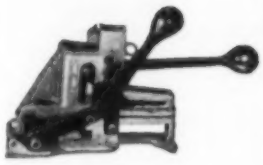
Schramm Compressor with vertical air receiver consists of a "V" Belt Drive and is mounted complete with air tank and cooling unit on base ready for installation. No costly foundations or special locations are necessary. This combination is built in sizes ranging from 50 to 600 cu. ft. displacement.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ Mention Item NED-4328 when writing ▲

Add these
PROFIT MAKERS
to your
Shipping Room Crew

PUT SIGNODE STEEL STRAPPING to work protecting your boxes, bags, bundles or crates against shipping damage...increasing man-hour output in your shipping department...speeding delivery...building customer good will...*cutting costs.*

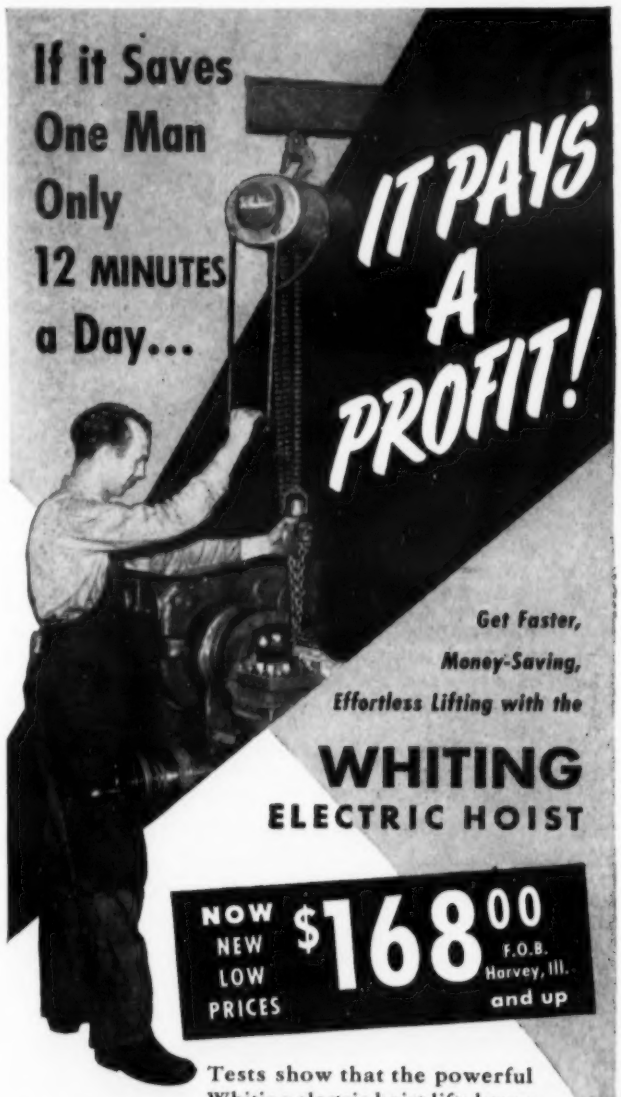


PUT YOUR PACKAGING METHODS ON A FAST PRODUCTION LINE BASIS with this new, scientifically designed strapping tool—the Signode A-2 automatic seal feed machine. This one tool tensions, seals, cuts in three easy strokes; ideal for big volume operations. Other Signode tools, equally modern and efficient, for every strapping need. Write for full details.

SIGNODE STEEL STRAPPING COMPANY
2632 North Western Avenue • Chicago 47, Illinois

SIGNODE

▲ Mention Item NED-4329 when writing ▲



Tests show that the powerful Whiting electric hoist lifts heavy loads 13 times as fast as a hand hoist. This means shorter set-up periods . . . less wasted time while machines stand idle and skilled workers wrestle with back-breaking loads. It means an end to ruptures and strained muscles, too.

Because of their unique worm-gear drive, Whiting hoists have fewer wearing parts than any other electric chain hoist. Investigate their possibilities.

WHITING
BUILDERS OF CRANES, MONORAIL SYSTEMS, and ELECTRIC HOISTS

Write for Bulletin H-100B

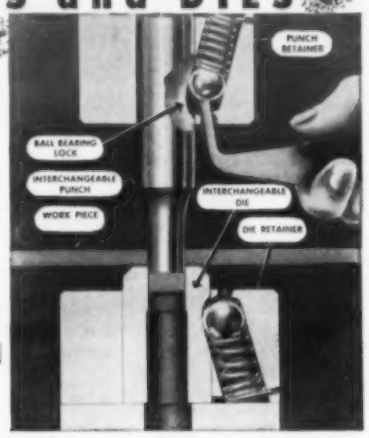
WHITING CORPORATION
15660 Lathrop Ave., Harvey, Illinois

☐ Send me a copy of your Bulletin H-100B.
☐ Send me the name of the Whiting distributor in my locality.

NAME _____
STREET ADDRESS _____
CITY _____ STATE _____

▲ Mention Item NED-4330 when writing ▲

R-B INTERCHANGEABLE PUNCHES and DIES



are *Simple* TROUBLE-FREE IN DESIGN *and* CONSTRUCTION

Any press operator can quickly and easily install and remove R-B punches and dies. Once inserted, however, they are securely locked vertically and radially by ball bearing locks for trouble-free performance on the press. Precision-made for perfect alignment and complete interchangeability, R-B punches and dies save time and money in die-building, reduce press "down-time" materially, and unlike most die-making parts, have a salvage value.

Get the whole story in this free catalog.

ALLIED PRODUCTS CORPORATION

Department 32 • 4610 Lawton Ave. • Detroit 8, Michigan

▲ Mention Item NED-4331 when writing ▲

TRUCKS THAT CAN "TAKE IT" . . . . . for years!

Bal Built means well built! Vulcanized Fibre construction — tough — lightweight — durable—Specially designed steel top rail—1/8" thick Fibre angles—Hardwood slat reinforcements—Seasoned oak bottom—Oil and grease proof—Easy rolling.

RACK, SHELF, BIN and SPECIAL TRUCKS—

Also Tote Boxes and Parts Boxes made in all sizes. Let us know quantity and size required. *Dependable Trucks and Boxes made for years.*

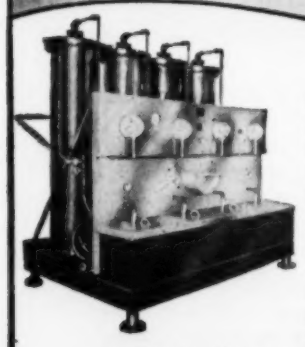
"SINCE 1898"

WILLIAM BAL CORPORATION

11 Johnson Street, Newark 5, N. J.

▲ Mention Item NED-4332 when writing ▲

Only Barnstead offers BOTH!

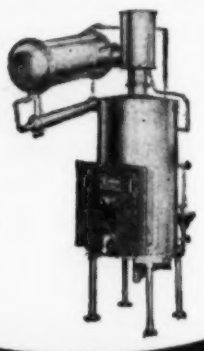


Demineralized Water

If you need high test, mineral-free water, Barnstead Demineralizers present several advantages. Greater economy, higher purity, simpler trouble-free operation, and durable construction. They are "package units" and require only connections to water, waste and an ordinary electric outlet. Send for catalog.

Distilled Water

Barnstead Laboratory and Industrial Water Stills are the proven standard of the scientific and industrial world. They produce water of unmatched purity and unvarying consistency. Let Barnstead engineers give their impartial recommendation whether you need distilled water or deionized water. Only Barnstead offers you the best equipment for both.



Barnstead STILL & STERILIZER CO.

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

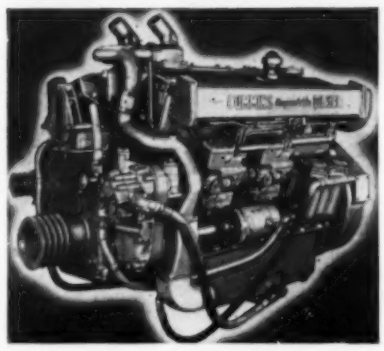
▲ Mention Item NED-4333 when writing ▲

BOLT CUTTER

Cutting of case hardened bolts, chain, reinforcing rod and other hard materials can be accomplished with this Manco special center cut bolt cutter with chisel type jaws. Through compound leverage, tool affords 2-ton cutting force at jaw with 50-pound pressure at handle. Jaws are forged tool steel, specially heat treated for this type of work. Cutter is available in 18, 24, 30 and 36-inch sizes with capacities up to 7/16-inch solid rod. Head assembly will fit standard bolt cutters and can be obtained separately. Made by **Manco Mfg. Co.,** Washington St., Bradley, Ill.

▲ Mention Item NED-4334 when writing ▲

HIGH-SPEED DIESEL ENGINE

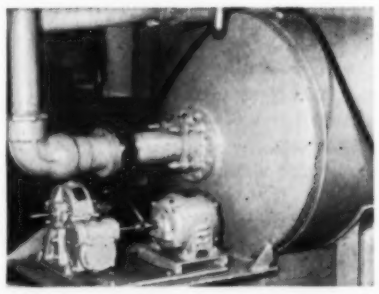


Providing advantage of high speed to high power range, models NVHS-1200 and NVH-1200 diesel engines are of four-cycle, twelve-cylinder V-type having bore of 5⅛ inches, stroke of 6 inches and piston displacement of 1486 cubic inches. Model NVHS-1200 is supercharged and has maximum rating of 550 horsepower at 2100 revolutions per minute, while model NVH-1200 is naturally aspirated and develops maximum of 400 horsepower at same speed.

Both engines are designed for use in off-highway automotive units, mobile mining equipment, shovels, cranes, draglines, industrial locomotives, oil drilling rigs and many industrial applications. Fuel pump used on engines employs single plunger which measures fuel charge for all cylinders to assure that each injector receives a proper amount of fuel at any required speed and load within ratings of engines. Made by **Cummins Engine Co.,** Columbus, Ind.

▲ Mention Item NED-4335 when writing ▲

ROTATING LEAF FILTER



Cleaning can be accomplished without removal of leaves on this 48-inch rotating leaf filter. Intended primarily for application in water filtration, it is used also for some light aqueous solutions. Leaves are counterhung on rotating shaft, and provision is made for flushing away sludge and used filter mediums with sprays without opening filter door. During cleaning operation, leaves are rotated slowly, and water is sprayed on both sides of screens. Sludge is drawn off into sump at bottom of filter. Discharge of filtered materials is through center shaft which passes through back of horizontal tank. Leaves are slid over discharge pipe, which is perforated to take discharge from each individual leaf, and are keyed to discharge shaft for rotating purposes. Rotation of filter leaves is by means of motor-driven worm gear at back of filter. Made by **Hercules Filter Corp.,** 204-D 21st Ave., Paterson 3, N. J.

▲ Mention Item NED-4336 when writing ▲

SINGLE-PHASE MOTORS

Available in capacitor-start induction-run types in ratings of 1 and 1½-horsepower and in capacitor start capacitor run types in ratings of 2, 3, 5, 7½ and 10 horsepower, this line of single phase motors is of improved design. Centrifugal switch formerly used to disconnect starting condensers from line after motor reaches running speed is replaced by voltage relay which is mounted in control cabinet furnished with motor. Control cabinet also includes across-the-line starter and necessary capacitors which make possible removal of capacitor enclosure on motor. Capacitor run types are supplied with oil type running capacitors which are also mounted in control cabinet. Line includes open dripproof, splashproof, totally enclosed, fan-cooled and explosionproof constructions. Made by **Louis Allis Co.,** 428 E. Stewart St., Milwaukee 7, Wis.

▲ Mention Item NED-4337 when writing ▲

CLEVELAND High Carbon Heat Treated Cap Screws

The fasteners that add *EXTRA*ordinary strength to your product *EXTRA*ordinary speed to its assembly

Made by The Kaufman Double Extrusion Process

CLEVELAND *Top Quality* FASTENERS — THE CLEVELAND CAP SCREW COMPANY, 2917 EAST 79TH STREET • CLEVELAND 4, OHIO. Warehouses: Chicago and Philadelphia. *Ask your Jobber for Cleveland Fasteners*

▲ Mention Item NED-4338 when writing ▲

eliminate needless labor

BRING AIR FILTERING COSTS *Down!*

Write For Your FREE Copy

This concise study gives you the facts, provides a work sheet on which you insert your own figures. In a few minutes you can prove which type of air filter is most economical for any central system. Write Owens-Corning Fiberglas Corporation, Dept. 921, Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Toronto, Ontario.

DUST-STOP*

AIR FILTERS

—a FIBERGLAS* product

*DUST-STOP is the trade-mark of Owens-Corning Fiberglas Corporation for impingement-type air filters made of glass fibers. FIBERGLAS is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.

▲ Mention Item NED-4339 when writing ▲

MAGNET WIRE WITH THE WORKABILITY FOR FAST, LOW COST WINDING

Here's wire of proved workability when subjected to the punishment of modern high speed winding—whether random or layer. It helps insure freedom from broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments.

Essex Extra Test has the good slip necessary in coil winding. Slides evenly and smoothly in place, resulting in maximum turns in minimum space and in coils that will pack tight. When used for motor armatures, no matter how narrow the slots, Essex extra abrasion resistance reduces rejections.

When you specify Essex Extra-Test Magnet Wire for any winding job you can be sure.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

Plants: Fort Wayne, Indiana; Detroit, Michigan; Anaheim, California. Warehouses* and Sales Offices: *Atlanta, Georgia; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N. J.; Philadelphia, Pa.; *Portland, Oregon; *St. Louis, Mo.; *San Diego, California; *San Francisco, California.

▲ Mention Item NED-4340 when writing ▲

Great Savings in CUTTING METAL

Faster metal cutting as the saw moves in one direction and there is a minimum waste of metal as it cuts to precision limits.

A low cost, labor - saving, automatic tool designed to cut anything to lengths within the throat capacity of 8" x 16".

Standard Model for occasional cutting or Wet Model for continuous cutting. Used in thousands of progressive plants.

MACHINE TOOL DIVISION
Kalamazoo Tank & Silo Co. Kalamazoo 16, Mich.

Exclusive Export Distributor

AMERICAN STEEL EXPORT CO., NEW YORK CITY.

▲ Mention Item NED-4341 when writing ▲

EACH
DART UNION
HAS THESE
MONEY-SAVING QUALITIES

Always Specify DARTS — because in length of service they cost least.

E. M. DART MFG. CO.
Providence 5, Rhode Island

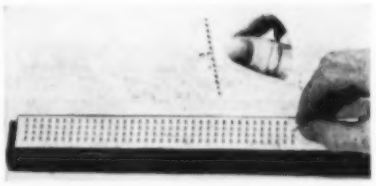
▲ Mention Item NED-4342 when writing ▲

ADJUSTABLE LIGHTING FIXTURE

Producing light intensity of 550 foot-candles at 3-inch working distance from twin 4-watt flourescent lamps, model 10 miniature flourescent lighting fixture provides intense but cool glare-free illumination for critical work. Wide choice of support arm lengths and arrangements is offered for ease of installment and adjustment in all directions. Fixtures operate on 115 or 220-volt alternating and 110-volt direct current. Lamps supplied as standard produce white light, although other colors are available, including daylight, blue, green, blue-ultra and ultraviolet. Finish is light gray baked enamel on outer surfaces with baked white enamel reflector. Made by **Stocker & Yale**, 48 Birch St., Marblehead, Mass.

▲ Mention Item NED-4343 when writing ▲

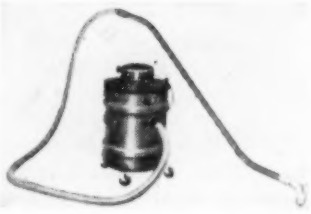
WIRE MARKER



Production - line manufacture of electrical units and wiring is facilitated with self - adhesive wire marker used as encircling marker or, with ends pinched together, as upright numbered flag. It is unaffected by humidity or temperature and is quickly removable without harming wire surface. Designed for wire with outside dimension up to 0.2-inch, marker measures ⅞-inch long and ⅜-inch wide. Available in 40 unit cards, marker is preprinted black on white, in numbered or alphabet series. Each marker has four vertical characters to assure visibility on either side of flag as well as around wire itself. Made by **Flag-It Wire Marker Co.**, 220 Rose St., Los Angeles, Calif.

▲ Mention Item NED-4344 when writing ▲

WET-DRY VACUUM CLEANER



Operating without belts, dust bags or brushes, this wet or dry vacuum cleaner is suitable for use in industrial plants, commercial buildings and institutions. Cleaner is equipped either as dry pick-up machine or, with adapter, as wet and dry pick-up machine. Tank has capacity of 1½ bushels or 9½ gallons, and 5/7-horsepower motor delivers 57 inches maximum waterlift. Cleaner is portable, being mounted on four hard rubber swivel casters. Fan is designed with multi-stage turbine blades for quiet operation. All seams below water line are double electro-welded, and tank has corrosion resisting interior finish. Adapter for wet pick-up consists of cylindrical vacuum chamber, baffle and float to control water capacity in tank and prevent overflow. Various attachments for special cleaning applications are available. Made by **American Floor Surfacing Machine Co.**, 598 S. St. Clair St., Toledo, O.

▲ Mention Item NED-4345 when writing ▲

It's *easier*, too, with Truck-Man Pallet Toter. Note 180° turn into car door with a heavy bulky load . . . and room to spare! That's typical Truck-Man maneuverability, designed into all three Truck-Man models.

Model DF Pallet Toter handles pallet loads faster and better because it's *designed* for horizontal pallet movement. Forks operate hydraulically, with complete control from driver platform. Weight empty, 920 pounds . . . load rating, 3500 pounds! Brake and clutch work from same lever. Turns 360° in its own length! Rugged, six inch wide rubber load wheels for easy riding and quiet operation; dual pneumatic drive wheels for traction and easy ride . . . "Friendly to floors."

Other models: Model D Skid Lift, over 1½ ton rating; Model DT, all 'round Platform Utility. *All three* powered by Wisconsin Heavy Duty air-cooled gasoline engine. *All three* give . . .

- Round-the-clock operation . . . no layups for battery charge . . . no battery charge equipment to buy.
- Economy . . . eight hours work on one gallon of gas.
- U/L approval . . . simplicity—safety—stamina! "and the operator rides with the load!"

$850.00 F. O. B. JACKSON
Ask any Operator or the truck-man Distributor in Your Area.

truck-man INC., 1414 W. Ganson, Jackson, Mich. UL

Send me information on the Truck-Man models checked below:
☐ Hydraulic Skid Lift ☐ Pallet Toter ☐ Platform Utility

Name ____ Title ____
Company ____ Street No. ____
City ____ Zone ____ State ____

▲ Mention Item NED-4346 when writing ▲

FOR NEW OR PRESENT BUILDINGS

Install BRADLEY Multi-Stall SHOWERS

Since Bradley Shower Units can be installed on any kind of floor including wood, they are practical installations for older plants as well as new buildings. They come partially assembled and require only 3 supply lines—hot water, cold, and drain—as compared to the 15 plumbing connections needed by five "single-stall" showers.

Bradleys offer the maximum in sanitation also; they have no corners or dark areas to collect dirt and receptors prevent contagious splashing. Economy of heating, water consumption and upkeep are other Bradley Shower features.

BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan Street, Milwaukee 1, Wisconsin.

Distributed Through Plumbing Wholesalers.

BRADLEY multi-stall showers

Above illustration shows one of the Bradley Showers installed at the Donner-Hanna Coke Co., Buffalo, N. Y.; Bradley Washfountain can be viewed through doorway.

Illustrated Catalog 4701 free upon request. Write today.

▲ Mention Item NED-4347 when writing ▲

Remove up to 6 cu. ft. of Cast Iron Per Tool Grind on Modern Planers

Strong, Durable, Clamped-on Kennametal Planer Tools . . . Make Heavy-Duty Planing Practicable

Now you can take heavy roughing cuts at high speeds (100-250 ft/min) on any of the newer type planers having a tool lifter. Clamped-on Kennametal Planer Tools make it practicable . . . and *profitable*. They remove metal at a faster rate—keep machine down time to a minimum—reduce tooling cost per piece—minimize grinding time and confusion.

Yes—you need a good, rigid, properly-powered, correctly-adjusted planer. And you *must* have a strong, shock-proof, thermal-strain-free carbide tool that can take a beating and like it. Here's where the uniformly sound structure of mechanically-held Kennametal K1 pays off. Read these typical performance reports:

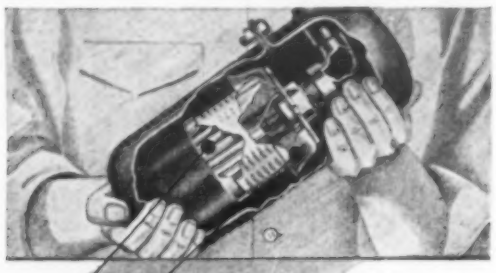
"Kennametal Planer Tools remove 6.5 cubic feet of semi-steel per tool grind." "5 cubic feet of 180 Brinell cast iron removed per grind." "6 cubic feet of 180 Brinell cast iron removed per grind."

Our field engineers can help you apply this cost-cutting Kennametal tooling to your planing operations. Ask them to do it. And keep in mind—the cemented carbide that has the strength and durability to do tough roughing jobs on planers successfully is the carbide that can cut tooling costs on *all* your milling, boring machine, and lathe work. That's Kennametal.

KENNAMETAL Inc., Latrobe, Pa.
MANUFACTURERS OF SUPERIOR CEMENTED CARBIDES AND CUTTING TOOLS THAT INCREASE PRODUCTION

▲ Mention Item NED-4348 when writing ▲

STAYNEW PIPE LINE FILTERS



ELIMINATE MOISTURE OIL DIRT PIPE SCALE

Tests prove that Staynew Filters often save their entire cost in a few weeks. By preventing the passage of foreign matter, they prevent excess wear, costly freeze-ups, damage to materials and interference with processes.

Exclusive Double-Action Principle Provides:

MECHANICAL SEPARATION—Deflector Cup drives foreign matter to bottom of container.

FILTRATION—Air or gas rises thru the original Radial Fin Insert which removes the lighter material.

DOLLINGER STAYNEW FILTERS

DETAILS ON REQUEST

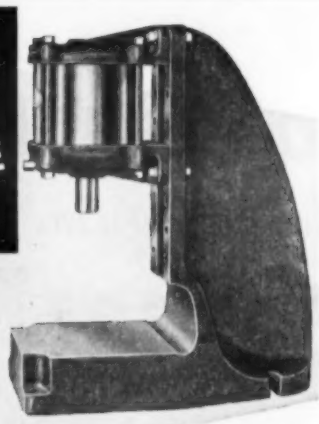
DOLLINGER CORPORATION

49 CENTRE PK., ROCHESTER 3, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

▲ Mention Item NED-4350 when writing ▲

FORM STAMP RIVET FLARE CRIMP



with this NEW

Bellows AIR-POWERED

ARBOR PRESS

POWERED by a special 5½" bore, 2½" stroke Bellows Air Cylinder, the Bellows Arbor Press develops a force of approximately 20 times operating air line pressure. The Press may be used on line pressures ranging from 5 to 175 psi. Built-in adjustable speed control valve permits positive control of the speed of the advance stroke.

Maximum clearance of the 1¼" diameter ram shaft is 7". Throat clearance of 5". The Press may be equipped with hand or foot controls, or safety controls of the pneumatic or electrical type.

Dept. NED 649

WRITE FOR BULLETIN

The Bellows Co.

AKRON 9, OHIO

927

▲ Mention Item NED-4351 when writing ▲

MAKES POLISHING EASIER and

cuts finishing costs too!

ELGIN DIAMOND COMPOUND

See for yourself how new, universally soluble Elgin Diamond Compound will produce immediate savings and better surface finishes. Write for your copy of this new Elgin Diamond Compound booklet today . . . ask for a free demonstration in your own plant!

Free!

INDUSTRIAL PRODUCTS DIVISION
ELGIN NATIONAL WATCH COMPANY
AURORA, ILLINOIS

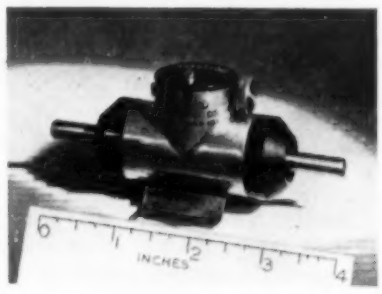
▲ Mention Item NED-4352 when writing ▲

SAW-FILE ATTACHMENT

Performing functions of both keyhole and hack saws, Key-Hac portable power saw and file attachment is of improved design. Tool will cut all metals including plate-stock, stainless steel and all types of metal sheet-stock in straight line or on radius and will leave burr-free finish without bending or stretching material. Saw will directly enter many materials without first drilling hole to start blade. Unit attaches to any electric or air drill or motor-driven flexible shaft of either ¼ or 5/16-inch Jacob's chuck capacity. Mechanism rides on three heavy-duty ball bearings and sealed-in lubricant. Unit is finished in triple chrome plate, weighs less than 4 pounds and is 11½ inches in length. Distributed by **Producers & Distributors, Inc.**, 4015 MacArthur Blvd., Oakland 19, Calif.

▲ Mention Item NED-4353 when writing ▲

MINIATURE SPEED DRIVE

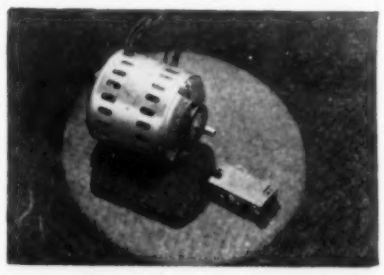


Capable of delivering up to 70 ounce-inches torque and 0.025-horsepower, miniature adjustable speed drive can be used on business machines, recorders, controllers, computers and similar devices. Ratio of input to output speeds is infinitely adjustable between 1:6 increase and 6:1 decrease with total speed range of 36:1. Dial and pointer indicate ratio setting, and adjusting knob is equipped with friction drag to prevent ratio wander. Maximum output torque is obtainable at zero speed, and operating speeds as high as 20,000 revolutions per minute are practical.

Internal construction employs rollers which contact disks on input and output shafts. Speed is adjusted by changing radius at which rollers make contact. Lock-up devices are provided to increase contact pressure automatically when load torque is increased. Other features include ball bearings on all rotating parts, permanent lubrication, overload protection and sealed construction. Made by **Metron Instrument Co.**, 436 Lincoln St., Denver 9, Colo.

▲ Mention Item NED-4354 when writing ▲

BUSINESS MACHINE MOTORS

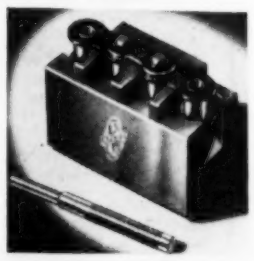


Designed for use in typewriters, accounting machines and other business machines, type KH lightweight constant speed fractional horsepower motors are of open ventilated sleeve-bearing construction. They can be obtained in ratings of 1/40-horsepower 1725/1425 revolutions per minute on 115-volt 60/50-cycle current; 1/40-horsepower 1425 revolutions per minute on 115-volt 25-cycle current; and 1/20-horsepower 3450/2875 revolutions per minute on 115-volt 60/50 cycle current. All are equipped with double-bonded resilient mounting rings including latches and three 12-inch leads.

Use of externally mounted switch permits motor to be of small overall size. It includes thermal cutout feature to open line circuit in time to prevent damage to motor in event of machine jamming. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ Mention Item NED-4355 when writing ▲

ROLLER CHAIN REPAIR SET



Available in sizes to fit any standard roller chain, this set facilitates chain repair and prevents binding and distortion of pin link. Repair set consists of anvil, fork and punch. To disassemble chain, prongs of fork are inserted between sideplates of chain so as to span rollers containing pins to be removed. Fork and chain are then laid in slot of anvil which is milled to contours of chain so that slippage cannot occur. In this position, chain is suspended on fork, and pins are removed by striking each one alternately until driven through links. Tool can be used without fork by resting chain on floor of slot and driving pins into two holes through base of tool. Milled corners allow use in vise. Made by **Atlas Chain & Mfg. Co.**, 3805-11 Castor Ave., Philadelphia 24, Pa.

▲ Mention Item NED-4356 when writing ▲

"A National Vulcanized Fibre Insulator is *just* the answer to our problem*"

*Required:
An insulating material, light in weight, resistant to wear, with good dielectric strength, ready machinability. National Vulcanized Fibre with all these qualities, plus—*was the perfect answer.*

In your development of efficient, economical products, it pays to investigate

A tough, horn-like material with high dielectric and mechanical strength. Excellent machinability and forming qualities, great resistance to wear and abrasion, long life, light weight. Sheets, Rods, Tubes, Special Shapes.

NATIONAL VULCANIZED FIBRE

Write for engineering help

NATIONAL VULCANIZED FIBRE CO.

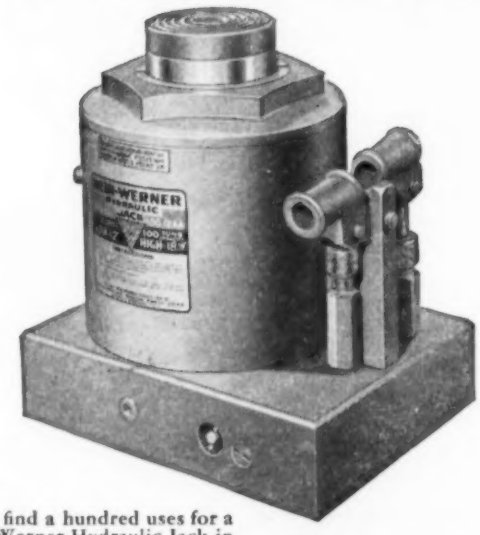
WILMINGTON, DELAWARE Offices in Principal Cities

Since 1873

▲ Mention Item NED-4357 when writing ▲

HYDRAULIC POWER

UP TO 100 TONS!



You'll find a hundred uses for a Hein-Werner Hydraulic Jack in your plant. These time-saving, labor-saving jacks are great for pushing, bending, moving or lifting, where trouble-free power up to 100 tons is required. Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. For complete details consult your industrial supply distributor or write us.

HEIN-WERNER CORPORATION

WAUKESHA, WIS.

▲ Mention Item NED-4358 when writing ▲

modern design for modern sanitation

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN... means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING... Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC... Shatter-proof, fireproof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-20 (illus.), Model LP-40 with self-sustaining hinge, and a complete line of conventional models. DEPT. NE

SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standard Bowls

▲ Mention Item NED-4359 when writing ▲

Simplify Battery Charging for your Electric Trucks with a

CHARG-O-MATIC

Multiple Circuit Motor-Generator Charger

2 Circuit Charger—Model No. H2D

To keep your motorized hand truck batteries brimful of energy at all times, give them the benefits of truly modern, simplified charging with the Hertner CHARG-O-MATIC. Any truck operator can use this amazingly economical charger safely, without danger of overcharging. All control features are fully automatic, with ammeter, pilot light and electrically driven time clock switch conveniently mounted on the control panel of the safe dead-front cabinet.

Occupying minimum floor space and completely enclosed, the multiple circuit CHARG-O-MATIC is especially suited for central service charging stations. Operators just drive the trucks up to the station and connect the battery circuit. That's all.

Profit by Hertner certainty: simplify your battery charging and prolong battery life with the CHARG-O-MATIC Charger. See your nearest electric truck representative or write direct for Bulletin No. 117.

THE HERTNER ELECTRIC COMPANY
12690 ELMWOOD AVE. • CLEVELAND 11, OHIO
A General Precision Equipment Corporation Subsidiary
MOTORS • MOTOR-GENERATORS • GENERATOR SETS

Mention Item NED-4360 when writing

meet industry's top

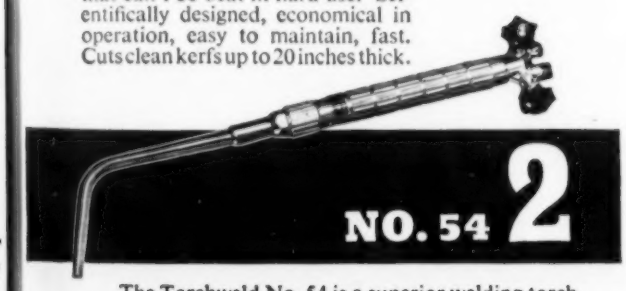
PRODUCTION TWINS

...for cutting and welding

They're saving materials, money, and time all over America . . .

NO. 75 1

The Torchweld No. 75 is a tough, rugged oxy-acetylene cutting torch that can't be beat in hard use. Scientifically designed, economical in operation, easy to maintain, fast. Cuts clean kerfs up to 20 inches thick.



NO. 54 2

The Torchweld No. 54 is a superior welding torch with ample capacity that operates at low pressures, and will take more gas out of every cylinder used. The welding flame is really stabilized thanks to the new "Stab-L-Flow" Universal Mixer.

TORCHWELD

Wherever heavy cutting and welding put a strain on apparatus, you'll find the Torchweld No. 75 Cutting Torch and the No. 54 Welding Torch standing up to the punishment *better* and *more economically*. Why? Because these dependable tools are *performance-proved* . . . engineered out of NCG's 30 years' experience in gas application. Let an NCG representative prove their superiority to *you!*

Ask for illustrated folder NTW-110, or for a demonstration

Consult your nearest NCG office or write to:

NATIONAL CYLINDER GAS COMPANY
Pioneers in Electric Welding since 1920
846 North Michigan Avenue Chicago 11, Illinois

NCG
EVERYTHING FOR WELDING

Copr. 1949, National Cylinder Gas Co.

Mention Item NED-4361 when writing

STEAM-DETERGENT CLEANER

Featuring fully automatic operation without moving parts, Speedylectric JC-30 Steam-Jet cleaner is effective on such jobs as cleaning machine tools and factory equipment, sterilizing washrooms and fixtures, degreasing tote boxes and parts, and cleaning windows and lighting fixtures. High pressure steam from built-in boiler is mixed with detergent at jet. There is no excess water to dilute detergent or flood working area. Pressure tank assures positive flow of material without height limitation.

Mounted on all-steel dolly with ball bearing rubber-tired swivel casters, unit weighs about 500 pounds. Since sparks, flames and fire hazards are eliminated, cleaner can be operated safely in oil refineries and other plants handling inflammable materials. Unit operates on 220-volt single or polyphase alternating current. Its boiler has capacity of 30 kilowatts and is ASME National Board stamped, Underwriters' Laboratories listing. Made by **Livingstone Engineering Co.**, Dept. JC-450, 100 Grove St., Worcester 5, Mass.

Mention Item NED-4362 when writing

GRAVITY FEED SPRAY GUN

Primarily designed for testing new methods and materials on test panels and sample products, model 7VF gravity feed spray gun makes it possible to spray small quantities of fast settling materials without power-driven agitators. It can be used also for touch-up and patching work. To insure that laboratory spraying characteristics will be duplicated exactly in actual production, gun is adaptation of standard model 7V used widely for ceramic finishing.

Gun has material feed inlet on top of head and is fitted with 1-quart top-mounted gravity-feed material cup. Connection of material cup to spray gun is through swivel mounting that enables adjustment of cup for correct operating balance and performance. Cup is provided with snap-on watertight cover which prevents spilling or leakage when cup is shaken or inverted for agitation of quick-settling materials. Other features include use of tungsten carbide inserts in material nozzle and on needle tip to minimize erosion of these parts by abrasive frit; and quick-detachable air hose connection which disconnects gun from air line and simultaneously shuts off air which comes on again when connection is re-established. Made by **Binks Mfg. Co.**, Dept. NED, 3124 Carroll Ave., Chicago 12, Ill.

Mention Item NED-4363 when writing

JIFFY ALL METAL CABINET

FOR SMALL PARTS STORAGE OR ASSEMBLY BENCH WORK

32 DRAWER UNIT $8.95
POSTAGE PAID
64 DRAWER UNIT $15.95

with RUST-PROOF ALUMINUM DRAWERS
NOW, WITH INDEX CARD HOLDER

APPROXIMATE SIZES
DRAWER
1¼" Deep
2¾" Wide
6" Long
32 DRAWER UNIT
6" Deep
12¾" Wide
15¼" High
64 DRAWER UNIT
6" Deep
25½" Wide
15¼" High

Spot welded steel cabinet, metal flange drawer guides, enamel finish and solid one-piece aluminum drawers in natural satin finish. The first multiple drawer (32 or 64 drawer units) metal cabinet for small parts storage or assembly bench work at such a low cost. Order now for immediate delivery. Send check or money order or rated companies shipped on receipt of purchase order.

KAYTEE PRODUCTS
DEPT P • BOX 588 • CANTON, OHIO

Mention Item NED-4364 when writing

TOTES MORE PAYLOAD at LESS COST . . .

LIGHT WEIGHT—Convoy Nesting Tote Box—weighs 50% to 60% less than steel . . . 2 cu. ft. size weighs only 7.2 lbs.

STRONG, DURABLE—Convoy Tote Boxes are made of chemically hardened corrugated board by an exclusive impregnation process . . . generally will support anything they will contain. Many of them have been in active daily use for more than two years. Armored rim for rigidity . . . strong, comfortable handholes.

LOW COST—Convoy Nesting Tote Box costs 50% to 60% less than steel . . . so inexpensive that they can be discarded when they finally become unserviceable.

More than 12 stock sizes of nesting boxes available now . . . write for details.

Dept. N
CONVOY, INC. CANTON 7, OHIO

Mention Item NED-4365 when writing

CHROMALOX *Electric* HEATERS

EFFICIENT & ECONOMICAL

ON-THE-SPOT HEAT

to fit your needs!

PACKAGED HEAT FOR EVERY REQUIREMENT

CHROMALOX Electric Heaters provide instant heat where you want it in processing and production lines. Quickly and easily installed, they give efficient day-in and day-out service at low initial cost and with minimum maintenance. Whether your problem is one of heating liquids, solids, moving parts, or any other application —check CHROMALOX Electric Heaters first. Our Application Engineers will work with you.

Want to Know How to Save Money With Electric Heat?
Send for the fact packed booklet, "100 Ways to Apply Electric Heat". Write today.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

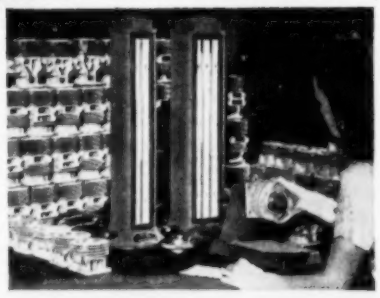
See other advertisement on page 4

CHROMALOX 10-86

ELECTRIC HEAT FOR MODERN INDUSTRY

Mention Item NED-4366 when writing

INSPECTION TIME SLASHED 40%



With this Federal Air Gage, Van der Horst Corp. of America (Olean, New York) inspects bores of porous chrome-plated aluminum cylinders at three points for diameter (tolerances .002" and .0015") and out-of-round (tolerance .001"). New inspection speed is gained by using modern Air Gage and modern, at-production, gaging routine — from 150 to present rate of 250 parts per hour. One whole inspection is eliminated and dimensional control of production is improved. It pays to use the right gage—right at production. For new Air Gage catalog write Federal Products Corp., 1118F Eddy St., Prov. 1, R. I.

FEDERAL

Dial Indicators • Indicating Gages • Special Gages
Electronic and Automatic Sorting Gages • Air Gages

Mention Item NED-4367 when writing

EASY DOES IT!

with the NEW

GO-GETTER

Telescopic Straddle Type Walk-Along Battery Liftruck

Pile it HIGH at LOW cost with push button ease! Pile it faster; pile it safely—the GO-GETTER way. It's so easy with all controls at end of handle. Utilize that valuable space near the ceiling in warehouse, stockroom or loft.

OPERATES IN SIX FOOT AISLES

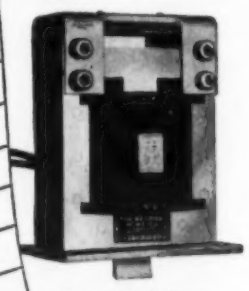
Save more floor space, also with this latest GO-GETTER which handles 48" x 48" pallets from narrow six-foot aisles, a tremendous advantage and the GO-GETTER is easy on the check book, too. Seven types cover all requirements.
Send us details of your needs and let us quote you.
Made by manufacturers of the famous REVOLVATOR PORTABLE ELEVATORS and RED GIANT HAND LIFTRUCKS.
Established 1904

REVOLVATOR CO.
DESIGNERS AND MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT
8732 Tonnele Avenue North Bergen, N. J.

▲ Mention Item NED-4368 when writing ▲

- ✓ Actuate Clutches
- ✓ Operate Switches
- ✓ Control Machines
- ✓ Print Identifying Symbols
- ✓ Operate Safety Devices
- ✓ Eject Work in Process
- ✓ Actuate Clamping
- ✓ Move Levers
- ✓ Operate Valves
- ✓ Vibrate Cutting Knives
- ✓ Open and Close Doors
- ✓ Hold Chucks
- ✓ Open and Close Hoppers
- ✓ Sort Inspected Parts

Namco "Stellite"—welded Solenoids are built in sizes with ratings from 2½ to 25 pounds, push or pull, at 1" stroke. Combination push-pull and other special applications are available. For alternating current only, constant or intermittent duty.



Namco Push-Type Solenoid with Saddle Stop

If you have jobs like these then you need SOLENOIDS

They're the modern, up-to-date way of doing jobs automatically—by remote control, and in cramped quarters if necessary.

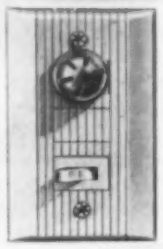
With the positive, accurate action of Solenoids you can simplify design, manufacture and operation. They're taking the place of expensive, bulky gear trains, levers, linkages and other mechanisms. Many a manufacturer has come to us with a cost or space problem—and has found the solution in Namco Solenoids.

Namco Solenoids—with "Stellite"—welded contacts, are compact, rugged and reliable. They're *engineered* to the requirements of the job with the aid of an *expert*. That's where we can help you. We'll be glad to recommend the size and style best suited to your job—with standard or special terminal blocks and mountings. Like more details? Ask for bulletin EM-46A.

ELECTRICAL MANUFACTURING DIVISION
THE NATIONAL ACME CO.
CLEVELAND, OHIO
182 EAST 131ST STREET • CLEVELAND 8, OHIO

▲ Mention Item NED-4369 when writing ▲

COMBINATION OUTLET PLATES

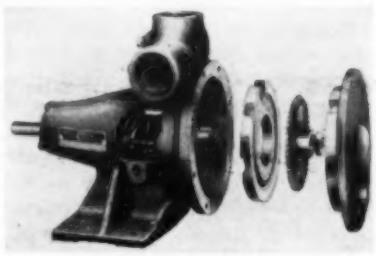


Simplicity and ease in installation are features of this line of plastic combination outlet plates which can be obtained in switch, outlet and pilot light combinations. Devices are factory assembled as one-piece easy-to-install unit which makes flush mounting automatic. Oval screw holes in plates provide ample leeway in squaring, and two screws mount complete unit.

Plates are made in combinations of four devices: three-way switch, single-pole switch, outlet and pilot light. Switches are rated at 10 amperes, 125 volts; outlet with double wipe contacts is rated at 15 amperes, 125 volts; and 6-watt pilot light at 75 watts, 125 volts. Made by **Monowatt Inc.**, 101 Hathaway St., Providence, R. I.

▲ Mention Item NED-4370 when writing ▲

TURBINE PUMPS



For use in water supply, condensate return and boiler feed services or any application where nonviscous and nonabrasive liquids are handled against moderate pressures, these medium duty turbine pumps are available in many types. Capacities are 2 to 10 gallons per minute and 20 to 100-foot head at 1750 revolutions per minute, or 2 to 8 gallons per minute and 100 to 200-foot head at 3450 revolutions per minute. Only moving part is impeller which is mounted on stainless steel shaft which turns on two ball bearings. Made by **Roy E. Roth Co.**, 2420 Fourth Ave., Rock Island, Ill.

▲ Mention Item NED-4371 when writing ▲

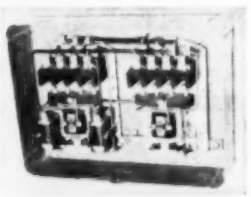
DIELECTRIC HEATING UNIT

Operating on either 230 or 440 volts, model 15R Thermex Red Head high frequency dielectric heating unit is designed for preheating large rubber and plastic preforms up to 6 x 23 x 26 inches in size. It is certified to meet FCC regulations relative to this type equipment. Unit is capable of raising temperature of 10 pounds of average material from 70° to 250° F in 1 minute, with larger loads being raised through same temperature range in slightly longer heating cycles.

Unit is of all-steel construction, copper plated where required and totally enclosed, occupies floor space of 37 x 37 inches and is fully portable and air cooled. Oscillator, preheater and rectifier sections are contained in individual cabinets rigidly mounted one upon the other. Preheater section has control panel with plate current meter, timer with range from 0 to 5 minutes, start and stop buttons and terminals for connecting remote control stations. Oscillator tube grid current is automatically controlled by device that requires no attention on part of operator. Handwheel on front of cabinet permits quick adjustment of height of electrodes when dissimilar loads are to be heated. Made by Thermex Div., **Girdler Corp.**, 200 E. Broadway, Louisville 1, Ky.

▲ Mention Item NED-4372 when writing ▲

MAGNETIC STARTERS



Available for across-the-line starting and reversing of polyphase motors rated up to 200 horsepower on 550-volt 60-cycle current, line of three-pole alternating current magnetic reversing starters can be used for industrial control applications including drives for machine tools and woodworking machines and for inching, jogging or plug-stop service as well as direct reversing service.

Four-pole starters with ratings of 7½ horsepower on 550-volt 60-cycle current are suitable for use with externally reversible single-phase motors of four-wire split-phase, capacitor or repulsion induction types.

Starters consist essentially of two magnetic contactors interwired for reversing operation, mechanically interlocked, and with or without thermal overload protection. Standard starters have sheet steel NEMA type 1 general-purpose enclosures, but on special order they can be furnished without enclosures for built-in or switchboard applications. Made by **Ward Leonard Electric Co.**, 115 S. MacQuesten Parkway, Mount Vernon, N. Y.

▲ Mention Item NED-4373 when writing ▲

MONEY-SAVERS

Fig. 732
Pat'd & Pats. Pend.
Drawer is extra

HALLOWELL

READY-MADE
WORK-BENCHES of STEEL

These serviceable, ready-made "HALLOWELL" Work Benches of Steel are made in standard heights, widths and lengths with long-wearing steel tops . . . high-grade, laminated wood tops . . . or steel tops covered with "Tempered Presdwood." Because the "HALLOWELL" is made of sturdy steel, it is rigid as a rock and does not require costly bolting to the floor. Being *standardized*, the single "HALLOWELL" Benches around your shop may be bolted together to form one long bench—that's a money-saving feature not practicable with "nailed-together" wooden benches.

Write for the name and address of your nearest "HALLOWELL" Industrial Distributor

OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNSYLVANIA, BOX 581
Chicago • Detroit • St. Louis • San Francisco

▲ Mention Item NED-4374 when writing ▲

New, Easy to Apply

Flexible Insulation with Self-Stik Edges

PREVENTS CONDENSATION

MYSTIK *Self-Stik* DRI-PIPE

No Tools! No Fuss! No Mess!

Stop condensation easily, quickly, positively, with MYSTIK Self-Stik DRI-PIPE. Applies to any surface in a moment—by its own adhesive—without fuss or mess. Goes on in a fraction of the time required for other types.

DRI-PIPE'S thick insulation plus positive outside vapor barrier prevents condensation. The waterproof outer backing protects the insulation. No painting is needed.

Learn how DRI-PIPE will solve your condensation problems—write today for free sample.

MYSTIK MYSTIK ADHESIVE PRODUCTS 2657 N. KILDARE AVE. • CHICAGO 39 *Self-Stik* **DRI-PIPE**

▲ Mention Item NED-4375 when writing ▲

The 'ONE-MAN SYSTEM' of Bulk Handling

Yessir! One man and a Payloader can move hundreds of tons of loose and bulk materials every day in your plant and yards . . . will scoop-up, carry, load, dump, spread, pile and lift. Travel at speeds up to 11 mph . . . go anywhere . . . work in close quarters . . . unload box cars.

Thousands of Payloaders are paying profits daily in all kinds of plants. There's a size for every job—from 10½ cu. ft. to 1½ cu. yd. bucket capacity. Full facts are yours for the asking. The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Ill.

HOUGH **PAYLOADER**
Manufactured by THE FRANK G. HOUGH CO.

▲ Mention Item NED-4376 when writing ▲

Looking for ways to cut costs?

use a WELLS METAL CUTTING BAND SAW

In thousands of plants all over the world, Wells Saws are proving that it is possible to cut metal faster and more accurately at lower cost. This is accomplished through machine design and the principle of *continuous cutting*. As each tooth does its share of the work, the blade is cutting all the time — there is no lost motion. This means more cuts per day and lower unit cost to you. Three standard models of Wells Metal Cutting Saws are available to meet virtually every need.

Wells SAWS

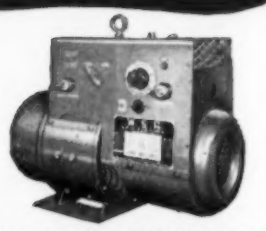
Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1213 HARDING ST., THREE RIVERS, MICHIGAN

Mention Item NED-4377 when writing

Here's the Outstanding DC Arc-Welder Development of All Time



Just Check These Features:

- COMPACT DESIGN — uses little or no floor space.
- GREATER MOBILITY — only 695 lbs.
- LOWEST RPM PER POUND OF WEIGHT.
- DIAL-LECTRIC CONTINUOUS CONTROL.
- REMOTE CONTROL — full arc control at the work.
- QUIET—you hardly know it's running.
- POLARITY SWITCH — an extra feature at no extra cost.
- DUAL-FAN COOLING SYSTEM—the coolest welder you have ever seen.
- HIGH-LOW RANGE — requires only a flip of a switch.
- PUSH-BUTTON START AND STOP SWITCH — overload protection.
- CLASS B GLASS INSULATION — highest quality available.

The New P&H NEMA-Rated Model WFA 300

(Welding Service Range 60-375 amps)

Here's the only DC Welder with time and money-saving Dial-lectric control — a compact, light-weight unit that runs at the life-preserving speed of 1800 rpm.

If you are looking for a DC welder that can reduce your welding costs, your best bet is a P&H WFA machine.

Get all the facts about this new, outstanding DC Welder. Contact your nearest P&H representative or write us for latest literature.

P&H ARC WELDERS
4537 W. National Ave.
Milwaukee 14, Wisconsin

HARNISCHFEGER CORPORATION

Mention Item NED-4378 when writing

ONE WRENCH OPENS ALL DRUMS

The DRUM MAJOR Universal Drum Wrench does the work of a dozen different wrenches—it has the openings and lugs to remove or tighten all standard drum closures. Eliminates a multiplicity of wrenches or costly makeshifts. Reduces tool investment and cuts operating time factor. Cadmium plated to resist corrosion. Overall length, 15½ inches. Packed singly—shipping wt.—3 lbs. Price $3.75, F.O.B. Los Angeles or Buffalo, New York. Dealers wanted. Order from Los Angeles office only.

NEW SPARK-PROOF DRUM MAJOR IN MONEL METAL $12.50

AERO TOOL COMPANY
6936 Avalon Boulevard Los Angeles 3, Calif.

SPIRAL FLUTE COUNTERSINKS

Aero *Spiral Flute* HSS Countersinks end chatter, cut clean and accurately stocked in 60, 82, 90, 100 degree included angle.

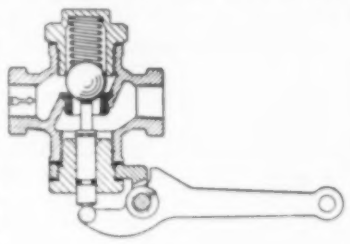
No. 1909-2—Cutter Dia. ⅜"—shank ¼"—$1.50
No. 1909-3—Cutter Dia. ½"—shank ¼"— 1.80
No. 1909-4—Cutter Dia. ⅝"—shank ¼"— 2.40
No. 1909-5—Cutter Dia. ¾"—shank ½"— 3.10
No. 1909-6—Cutter Dia. 1" —shank ½"— 4.60
F.O.B. Los Angeles—
Lower prices in quantities.
If not available from your mill supply dealer, order direct.

AERO TOOL COMPANY
6936 Avalon Blvd., Los Angeles 3, Calif.

Mention Item NED-4379 when writing

AIR-WATER OPERATING VALVE

Adaptable to service where fast, positive action and tight closing are necessary, this Type BA-1 self-sealing air or water operating ball-type valve is fitted with quick-opening lever which can be adjusted to any horizontal position. Ball valve closes tight with inlet pressure and will not collect dirt or other foreign matter. Stem is sealed by O-ring which is not accessible to tampering or adjustment.



Valve is suitable for use with air, water and other fluids of noncorrosive nature up to 200 pounds per square inch pressure and temperatures up to 150° F air and 180° F water. Valve is constructed with cast semisteel body, integral rubber seat insert and screwed connections of ½-inch size which can be bushed to ¼ or ⅜-inch. Made by **Leslie Co.**, 119 Delafield Ave., Lyndhurst, N. J.

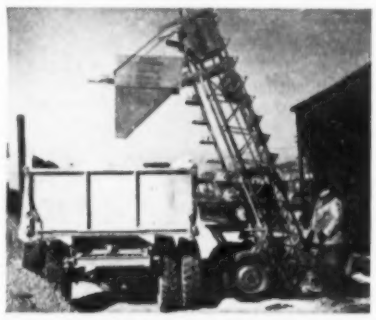
Mention Item NED-4380 when writing

HIGH-SPEED ELECTRODE

Designed for making short intermittent welds at high speeds on all gages of steel in any position, Hobart No. 313 electrode operates on either alternating or direct current with straight or reverse polarity. This Class E-6013 electrode affords forceful spray-type arc which can be started without scraping or hitting electrode against work surface, and tendency to stick to workpiece is eliminated. It is available in 12-inch lengths in 3/32-inch size and in 14-inch length in ⅛, 5/32 and 3/16-inch sizes. Made by **Hobart Brothers Co.**, Hobart Square, Box 13, Troy 1, O.

Mention Item NED-4381 when writing

BUCKET TYPE ELEVATOR



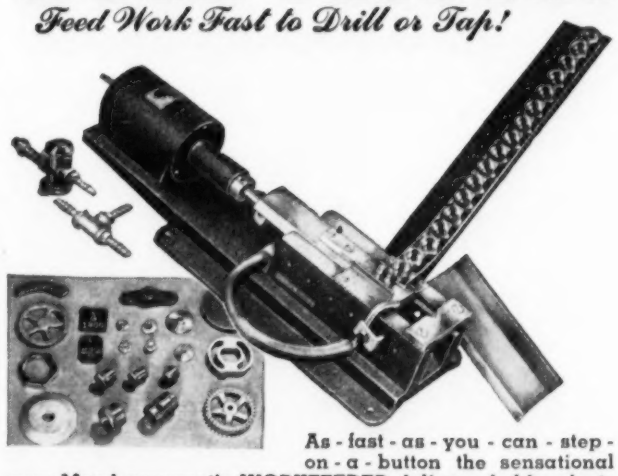
Gravel, stone, coal, sand, cement, aggregates, cinders and chemicals can be transferred from hopper cars to truck or stockpile at rate of 1½ to 2 tons per minute through use of Mackroy car unloader. This bucket type elevator of tubular steel construction functions as single operating unit and eliminates need for concrete pit at trackside. Rail bed is not disturbed, and removal of unloader during location or movement of hopper cars is unnecessary. Feeder unit is readily installed under rails and between two ties with minimum spread of 16 inches.

Easily transported, unloader is one-man operated. Continuous feed is assured by gravity assisted feeder. Rate of material flow is accelerated in downward movement through feeder by means of special eccentric that imparts upward and outward thrust, thus activating feeder pans and aiding normal gravity flow. Made by **Markroy Co.**, Dept. ND-1, Sixth & McCambridge, Madison, Ill.

Mention Item NED-4382 when writing

Boost Output with MEAD WORK FEEDERS

Feed Work Fast to Drill or Tap!

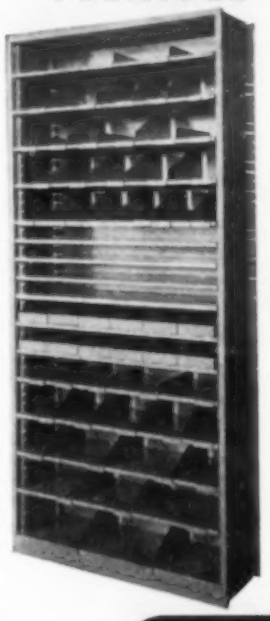


As-fast-as-you-can-step-on-a-button the sensational new Mead pneumatic WORKFEEDER delivers, holds, ejects small parts to be drilled, reamed or tapped. Accommodates stampings, castings, screw machine parts, etc. Adjustable to sizes up to 3". Foot automatic control; operator's left hand is free to keep hopper loaded. Write for new Mead AIR POWER Catalog describing "Mead Family" of air operated fixtures and devices.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. N-69-A CHICAGO 41, ILL.

Mention Item NED-4383 when writing

FOR ANY INDUSTRY FLEXIBLE PARTS BINS



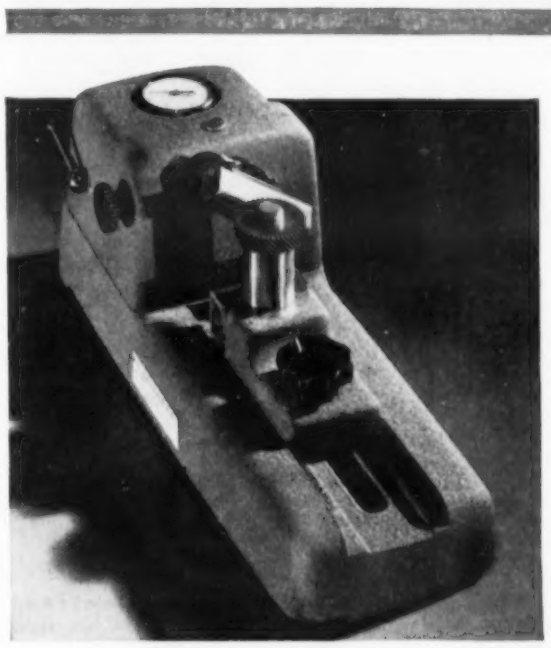
The FLEX-I-BIN is versatile enough to handle any storage problem. Instant arrangement of shelves, dividers and trays to suit your needs. No bolts, screws or clips . . . dividers snap on anyplace . . shelves slide in place on 1½" centers. All-welded heavy steel construction, smooth edges, baked enamel finish.

HANDLE MORE PARTS IN LESS SPACE . . . FASTER AND AT LOWER COST WITH FLEX-I-BIN!

Write or wire for complete specifications.

BORROUGHS MANUFACTURING COMPANY
3030 N. Burdick St., Kalamazoo, Mich.

Mention Item NED-4384 when writing



CHECK GEARS BEFORE THEY'RE FINISHED

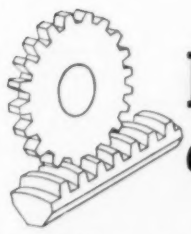
● This is a Kodak Backlash Gage. It's a workbench form of the Kodak Conju-Gage principle, a new money-saving idea that helps you make sure you're passing every good gear, rejecting the ones that'll make trouble.

The Kodak Backlash Gage is a sturdy, quick-reading instrument for an operator to use in setting up a gear-cutting machine accurately and for checking backlash under operating conditions. Essentially, it measures departure from a standard center distance between the gear and a Kodak Conju-Gage Worm Section.

That Kodak Conju-Gage Worm Section is the key to the precision, economy, and versatility of this new method for checking gears, in production and final inspection. A single Worm Section is accurately conjugate to gears of any helix angle and diameter as long as the normal pitch and pressure angle are the same. It can be made more accurately than circular master gears, is easily checked, and can be reground repeatedly to its original specifications.

Write for booklet giving full details.

EASTMAN KODAK COMPANY
Industrial Optical Sales Division, Rochester 4, N. Y.



Kodak CONJU-GAGE

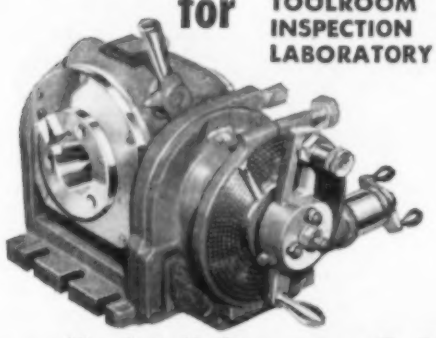
"Kodak" is a trade-mark

Kodak

Mention Item NED-4385 when writing

Get the Finest Dividing Head

for PRODUCTION TOOLROOM INSPECTION LABORATORY WORK



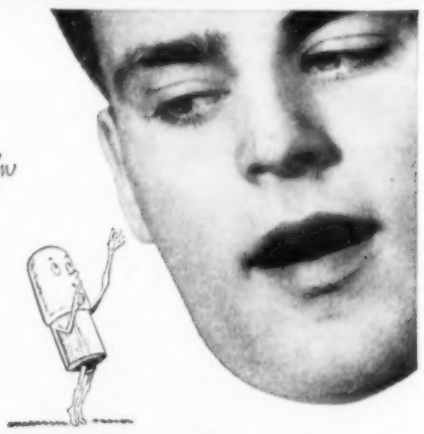
Buy a Model K Kearney & Trecker Universal Head with These Features

- Hypoid Bevel Gearing for 8 times faster indexing — 5:1 ratio
- Preloaded Ball Bearing Design for Spindle mounting
- National Standard No. 50 Taper Spindle
- Double Index Plates — plus or minus .0001" tolerance between adjacent holes
- Positive, Distortion-free clamping

Write for complete details in Catalog WA-12A.

KEARNEY & TRECKER CORPORATION
6784 W. National Ave. • Milwaukee 14, Wis.

▲ Mention Item NED-4388 when writing ▲



Little lamps add new sales appeal to many products

MINIATURE LAMPS

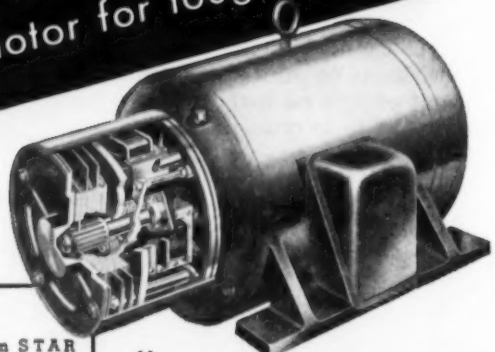
GENERAL Electric miniature lamps can be used in hundreds of ways to give extra safety, extra convenience, or a touch of light and color. Use them as indicators, or to light up dark places, or for novelty effects. All sizes and voltages, filament or neon glow. Write General Electric, Dept. 166-NED-6, Nela Park, Cleveland 12, Ohio.

You can put your confidence in—

GENERAL ELECTRIC

▲ Mention Item NED-4389 when writing ▲

The STAR BRAKEMOTOR is the best d------d* motor for tough jobs!



Full data on STAR Brakemotors (½ hp to 60 hp)... and how they perform on tough "start and stop" jobs... are found in STAR's new Brakemotor Bulletin. Write for your copy.

*DemandeD... by leading manufacturers of materials-handling equipment where motors must stand up under a daily beating from heat, cold, shock and strain... and be depended upon to "start and stop" loads with split-second timing—and minimum maintenance.

Star Electric Motor Co.
Standard and Special Motors
214 Bloomfield Avenue, Bloomfield, New Jersey

▲ Mention Item NED-4390 when writing ▲

HIGH PRESSURE GAGE

Designed for testing high pressure gases and liquids where gages are subject to extreme pressures as in manufacture of ammonia, hydrogen, nitrogen or in chemical and mechanical research, these gages have solid wall cast integrally with case to separate Bourdon tube and movement section from observer. Entire back of case is fitted with spring mounted safety release. In event of tube rupture, safety release plate will momentarily discharge high pressure mediums away from observer. Bourdon tubes are beryllium copper or stainless steel and are threaded at both ends with cut full threads for interference fit. Gages have deep-bushed stainless steel geared movements of high ratio. Accuracy is 1 per cent of full scale reading on all pressures up to 50,000 pounds per square inch and 2 per cent of full scale reading on all pressures of 60,000 pounds per square inch and over. Made by **American Machine & Metals, Inc.,** United States Gauge Div., Sellersville, Pa.

▲ Mention Item NED-4391 when writing ▲

TWO-WHEEL BARREL TRUCK

Weighing only 63 pounds and having capacity of 1000 pounds, two-wheel barrel and drum truck can be operated safely by one man. Single center column handle bar type frame is 1¼-inch tubular steel, and center column is square steel tubing. It is mounted on heavy-duty rubber-tired wheels 10 inches in diameter and having face width of 2½ inches. Wheel hubs have Hyatt roller bearings and grease gun fittings. Wheel and axle assembly has load compensating movement that enables truck to stand in erect position when not in use. Made by **Thomas Truck & Caster Co.,** 3330 Mississippi River, Keokuk, Iowa.

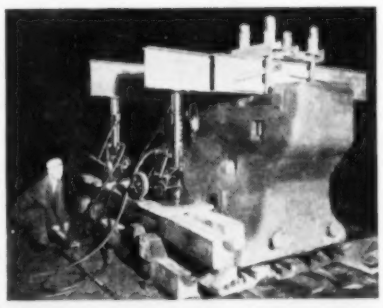
▲ Mention Item NED-4392 when writing ▲

EXTENSION SCAFFOLD

Versatility is feature of this Utility model Hi-Lift extension scaffold which can be extended from 6-foot ladder to 20-foot scaffold in five minutes. It occupies floor space as small as 29 x 54 inches, with outriggers for extra stability and roller bearing swivel casters on all legs. Scaffold can be operated by one man and partially extended to any desired height. It is available in sizes to meet all requirements. This unit is particularly suitable for use in industrial plants where it is necessary to clean and perform maintenance operations in high places. Made by **Atlas Industrial Corp.,** 845-ND 39th St., Brooklyn 32, N. Y.

▲ Mention Item NED-4393 when writing ▲

AIR MOTOR POWER JACK



Rigging and handling of heavy industrial machinery, sinking piling, straightening steel pipe and general plant maintenance operations as well as railroad maintenance can be accomplished through use of this pneumatic power jack. Operated by integral air motor under normal shop air pressure of 80 to 90 pounds per square inch, jacks have capacities from 20 to 100 tons. Constructed of both steel and malleable iron, they have long trundling handles and collapsible spotting handles for ease of movement and placement and solid rubber-tired roller bearing wheels for long-range movement over rough surfaces.

Actual raising and lowering are controlled by air motor, and automatic shut-off prevents ram from leaving housing and spilling load. Jacks are designed to prevent lowering or creeping in case of air failure. Safety keyway in ram checks head from turning and shifting load. Jacks are lubricated through plugs in jack and air motor, and screened-in air hose connection can be removed for cleaning. Made by **Duff-Norton Mfg. Co.,** 2709 Preble Ave., Pittsburgh 30, Pa.

▲ Mention Item NED-4394 when writing ▲

First in a series of Unusual Grinding Wheel Operations

Giving the RAZOR BLADE a close shave!

●"Look Sharp — Feel Sharp — Be Sharp" . . . This world famous slogan has a definite relationship with the exacting requirements that the Gillette Safety Razor Co. place upon BAY STATE grinding wheels. Just imagine the precision limits that require a scientifically directed beam of light to measure the keenness of a cutting edge!

Whatever YOUR grinding problem may be, BAY STATE can solve it . . . fast. Possibly the exact specifications to meet your requirements can be supplied directly from large stocks either in Westboro, branch warehouses, or our distributor stocks strategically located throughout the United States.

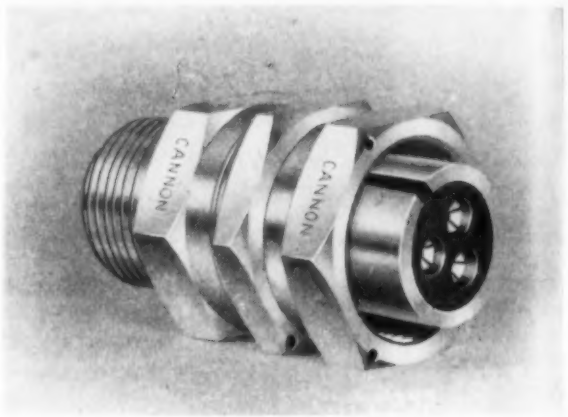
Send us your grinding problems. We can help you.

Photograph, Courtesy of Gillette Safety Razor Company

BAY STATE ABRASIVE PRODUCTS CO.
Westboro, Massachusetts, U. S. A.
Branch Offices and Warehouses - Chicago, Cleveland, Detroit
Distributors — All Principal Cities

▲ Mention Item NED-4395 when writing ▲

VIBRATIONPROOF • RADIO SHIELDED



MOISTUREPROOF • PRESSURIZED

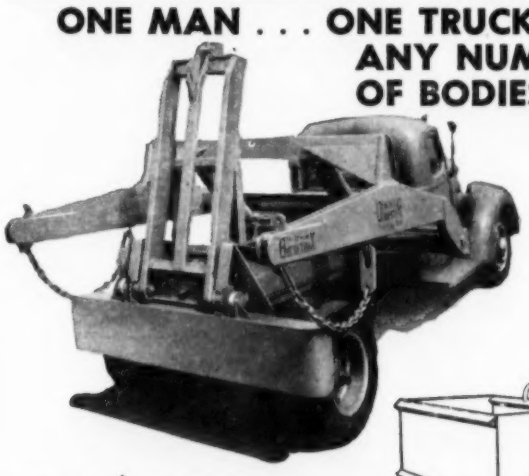
This new Series of "--AF" multi-contact electric connectors is adaptable to points of high vibration by means of new locking features, new resilient insert material, and construction. Tested to 30Gs. in actual operation flight. AN-Type layouts. . . . Write to Department F-113 for hi-G-1 Bulletin.

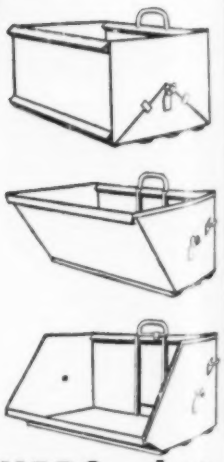
SINCE 1915

CANNON ELECTRIC
Development Company 3209 HUMBOLDT ST., LOS ANGELES 31, CALIF.
DIVISION OF CANNON MANUFACTURING CORPORATION

▲ Mention Item NED-4396 when writing ▲

ONE MAN . . . ONE TRUCK . . . ANY NUMBER OF BODIES





DEMPSTER DUMPSTER

Any number of bodies from 1½ to 10 cubic yard capacity are quickly and economically handled by one man and one truck equipped with a Dempster-Dumpster Hoisting Unit shown above. Standard or special bodies, built to handle any type of materials, are placed at loading points and when loaded, are picked up, hauled and dumped . . . entire operation handled by hydraulic controls in cab . . . no wasted time by truck or driver. Cost of installing the Dempster-Dumpster System is surprisingly low. Savings in equipment and maintenance, and increases in production are tremendous. Write for catalog 247 now.

DEMPSTER BROTHERS, Inc.
449 N. Knox Knoxville 17, Tennessee

▲ Mention Item NED-4397 when writing ▲

Guard Against Costly Power Failures with

ONAN STANDBY

ELECTRIC PLANTS

When power fails, business comes to a standstill. Materials in process are wasted, men and machines stand idle, lives may be endangered. Prevent the disastrous effects of power failure with a low-cost, easy-to-install Onan Standby System. The generating plant starts automatically when commercial power fails, takes over the power load without interruption, stops automatically when power is restored. Many models: 350 to 35,000 watts, A.C.

Write for Catalog

D. W. ONAN & SONS INC.
3691 Royalston Ave., Minneapolis 5, Minn.

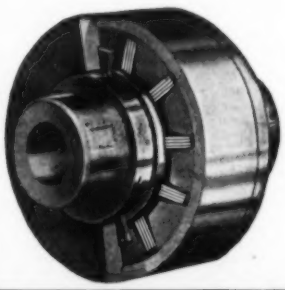
ONAN STANDBY POWER

▲ Mention Item NED-4398 when writing ▲

KUSHION-TORK
WHAT IT WILL DO FOR YOU

The Cushion Torque of Kanti-Lever Couplings absorbs the hammer blows of sudden or reversing loads and dampens the torsional and radial vibration that cause wear, fatigue and sometimes failure of Motors, Speed Reducers, Ball Bearings, and productive machinery. No other coupling is like the Kanti-Lever: It has a circular series of laminated Cantilevers of 200,000 lb. steel, operating in slots, the tapered sides of which automatically stiffen the Cantilevers under increased overloads. Special end-play up to four inches is possible without end thrust. The outer periphery of the Kanti-Lever is available as a brake drum for quick-stopping or reversing machinery.
Send for Bulletin No. 28-D.

Kanti-Lever Couplings



4,000,000 h. p. in Use
MFGRS. OF SECTIONAL STOCK RACKS

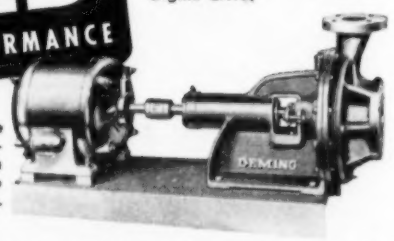
BROWN ENGINEERING CO.
129 NORTH 3RD ST. READING, PENNA.

▲ Mention Item NED-4399 when writing ▲

ITS FEATURES KEEP OWNERS

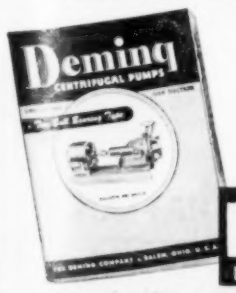
SOLD
ON ITS PERFORMANCE

Deming Side Suction Centrifugal Pump illustrated is Fig. 4023, No. 3 Motor Driven Unit. Also furnished for belt drive, or gasoline engine drive.



These pumps range from 1 to 6 inch discharge in size with capacities from 10 to 1200 gals. per minute.

Two ball bearing design and heavy duty construction make these Deming Pumps capable of sustained operation with a minimum of attention. Bearings are mounted in the support head so they are never affected by the liquid being pumped. Shaft is of ample size to insure smooth, uniform operation under heavy load. Bearing span is in proper proportion to impeller overhang which makes these double bearing pumps thoroughly reliable. Impeller may be adjusted while pump is running. Numerous other important features of these pumps are illustrated and described in a 16-page catalog bulletin.



SEND FOR BULLETIN NO. 4013-A

You need this bulletin to check up on the various important features of Deming Side Suction Double Bearing Pumps. Write for FREE copy.

THE DEMING COMPANY
520 BROADWAY • SALEM, OHIO

DEMING
THE COMPLETE LINE
PUMPS AND WATER SYSTEMS

▲ Mention Item NED-4400 when writing ▲

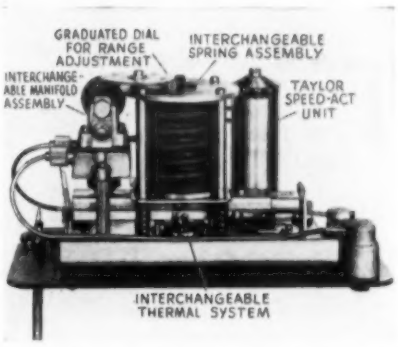
GRINDER-MILLER

With speed of 45,000 revolutions per minute and developing over 1/5-horsepower, Precise Super 40 grinder-miller is adaptable to almost any tool or production setup in standard lathe, milling machine, drill press or other stationary machine tool. Used with or without Coolflex flexible extension or in machine setups, it drives mounted wheels up to 1¼-inches in diameter; unmounted wheels, cut-off wheels and metal saws up to 2 inches in diameter by ¼-inch width and small high speed carbide mills up to ⅜-inch diameter and 1-inch width. Motor housing is of machined aluminum alloy, and ball bearings are lifetime lubricated. Aircooled motor is protected from overload by Fusetrons and is complete unit with armature and field assembly in self-contained cartridge. With speed control, regulation within range of 15,000 to 45,000 revolutions per minute is possible.

Accessories include flexible extension, tool and universal mounts and line of lathe stands with built-in speed control and Magni-Ray illuminated magnifier for standard and special applications such as wire stripping and mica undercoating. Finishes of 1 micro-inch and less are possible through use of special diamond compounds. Made by **Precise Products Co.**, 1328-30 Clark St., Racine, Wis.

▲ Mention Item NED-4401 when writing ▲

TEMPERATURE TRANSMITTER

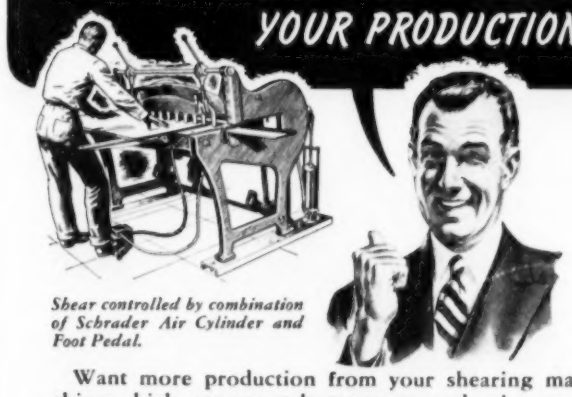


Particularly useful for applications where it is desirable to have indication, record or control remotely located from point of measurement, Transaire with Speed-Act force-balance type pneumatic temperature transmitter provides accuracy, high speed of response, small thermal elements and short range spans within limits of −375° to 1000° F. Incorporation of Speed-Act overcomes inherent lag present in response of thermal measuring element and improves quality of measurement of those elements requiring separable wells.

Transmitter is compact unit fully encased to provide adequate protection from dust and moisture. Its output in pounds per square inch is proportional to temperature of its thermal element; and by means of ¼-inch outside diameter copper tubing, this pressure change can be transmitted to recording or controlling receiver located as far as 1000 feet away. Convenient mounting brackets are provided for pipe or wall mounting, or adjustable bracket can be supplied when instrument is to be used with separable bushing. Made by **Taylor Instrument Cos.**, P. O. Box 110, Rochester 1, N. Y.

▲ Mention Item NED-4402 when writing ▲

TAKE A TIP FROM US . . . AIR POWER CAN DOUBLE *YOUR PRODUCTION*



Shear controlled by combination of Schrader Air Cylinder and Foot Pedal.

Want more production from your shearing machines, kick presses, arbor presses and other machines? Then convert them to air controlled operation with Schrader Air Cylinders and Valves. Operators work more efficiently, with less fatigue, and turn out more uniform work when machines are controlled by compressed air. Then, too, frequently it's possible to shear heavier gauge metal. Schrader Air Cylinders and Valves are easy to install and easy to operate. Get complete information and free literature now. Write to Dept. 7.

A. SCHRADER'S SON
DIVISION of SCOVILL MANUFACTURING COMPANY, INCORPORATED
478 Vanderbilt Avenue Brooklyn 17, N. Y

▲ Mention Item NED-4403 when writing ▲

New... Crown Electric Tachometers

Improve efficiency, quality of product—save time and material by knowing exact speed of equipment at all times. Simple, rugged, extremely accurate Crown Tachometers now make this possible—at low cost.

Ideal for use on Diesel Engines, Textile Machines, Paper Machines, Machine Tools and many other applications where accurate speed measurements are desirable. Send for full information.

The New CROWN E-Z Mark ETCHER

will permanently etch onto any type metal tool or name plate any name or trade mark that can be drawn, typed or written—with the new Crown E-Z Mark Etcher. It's fast, permanent, easy to use, economical and safe. It's the most amazing marking tool ever made for production marking or for individual identification. Send for Sample Etching.

Sales Territories available.
Ask for details.

CROWN INDUSTRIAL PRODUCTS CO.
1307 W. 69th St. Chicago 36,

▲ Mention Item NED-4404 when writing ▲

Ageproof VELLUM

Better Drafting and Better Prints

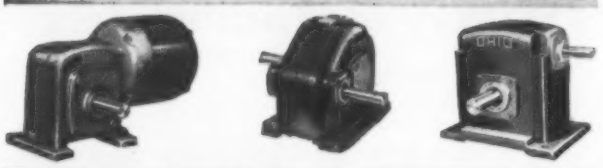
Unless you have tried Dietzgen's *Ageproof* Vellum it is not possible to appreciate the enthusiasm with which *thousands* have swung over to its *exclusive* use. They call it the *perfect* drafting medium . . . the finest surface for pencil or ink drawing they have ever had . . . a surface and transparency unimpaired by repeated erasures . . . a surface that *stays* clean for sharper, clearer prints. Dietzgen's *Ageproof* Vellum is plasticized through and through for *permanent* transparency. No oil, wax or grease to turn rancid, bleed, fade or capture dirt and dust. No yellowing or brittleness after years of storage. For better drawings for better prints...every time and all the time, use Dietzgen's *Ageproof* Vellum. In rolls, cut sheets, and printed sheets. For supplies or test sheets, call on your Dietzgen dealer or the nearest Dietzgen office.

EUGENE DIETZGEN CO.
Chicago • New York • San Francisco • New Orleans
Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee
Dealers in All Principal Cities

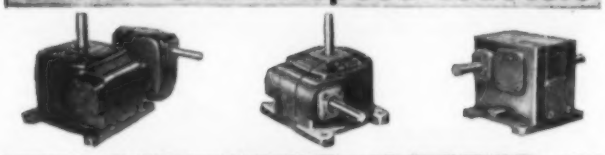
DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ Mention Item NED-4405 when writing ▲

HOW MUCH will one of these



OHIO GEAR speed reducers



CUT YOUR COSTS?

You can make substantial cuts in the drive costs of the machines you build and the equipment you use by specifying Ohio Gear Stock Speed Reducers. They save you and your customers money in these three ways:

1. They are *stock* so they save the extra cost of special orders.
2. Readily available, they eliminate waiting time for special orders.
3. Parts and replacement are quicker, saving expensive down-time.

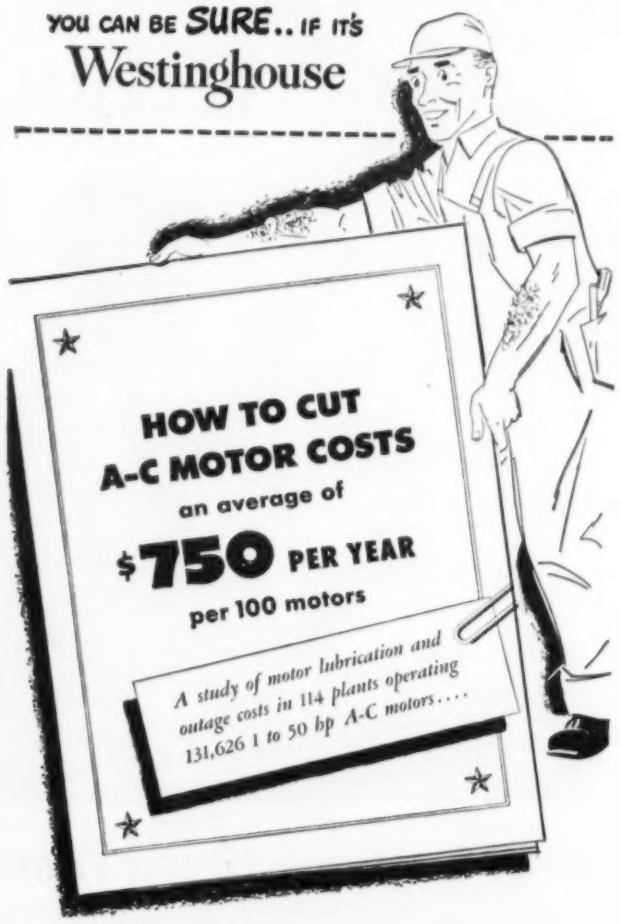
THE OHIO GEAR COMPANY
1320 East 179th St., Cleveland 10, Ohio

OHIO GEARS

Ohio Stock Reducers are available in ratios from 3:1 to 24000:1; single reduction capacities from ¼ H.P. to 15 H.P.; double reductions from 25 in. lbs. to 12000 in lbs. torque. Check the advantages and savings you can make by using "Ohio Stock" reducers for your own use.

▲ Mention Item NED-4406 when writing ▲

YOU CAN BE SURE.. IF IT'S Westinghouse



HERE'S HOW motor costs can be REDUCED

Motor lubrication costs *can* be eliminated—costly motor outages *can* be radically reduced!

Get the facts in this 16-page booklet—the result of an impartial survey made in 114 leading industrial plants operating a total of 131,626 a-c motors from 1 to 50 horsepower.

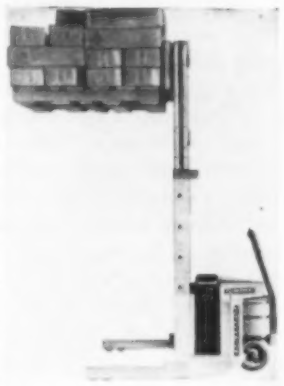
This booklet shows how much it actually costs in dollars and cents to lubricate and inspect conventional motors . . . how much the average motor outage costs—and how frequently and why they happen. It shows how and why Life-Line motors eliminate lubrication costs and cut outage costs.

Ask your Westinghouse representative for your copy today, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh, 30, Pa.
J-21513

Westinghouse Life-Line Motors

▲ Mention Item NED-4407 when writing ▲

LIFT TRUCK



Maximum maneuverability with minimum floor space required are features of Go-Getter model 6-48 telescopic straddle type lift truck. Compact design allows ceiling-high tiering of 48 x 48-inch pallets from 6-foot aisles. With capacity of 2500 pounds, truck has collapsed heights of 68 and 83 inches and lifts of 85 and 115 inches. Nontelescopic type has 83-inch high fixed mast and 64-inch fork lift. Made by **Revolvator Co.,** 2032 86th St., North Bergen, N. J.

▲ Mention Item NED-4408 when writing ▲

PAINT SPRAY UNIT

Adaptable to maintenance work where speed and portability are required, model DP direct-drive piston type 1/3-horsepower portable paint spray unit can apply enamels, lacquers, shellacs, varnishes and other industrial finishes. Unit delivers ample volume of air at 40 pounds per square inch working pressure to operate standard spray guns. It is intended for operation on 110-120-volt alternating current, its motor is equipped with safety cutout overload switch, and oversize cooling fins on compressor assure cool operation. Made by **Binks Mfg. Co.,** Dept. NED, 3124 Carroll Ave., Chicago 12, Ill.

▲ Mention Item NED-4409 when writing ▲

WET TOOL GRINDER

Of improved design, model M-20 wet tool grinder is primarily intended for hand grinding and dressing lathe and planer tools, large diameter drills and other large cutting tools that must be ground with wet wheel to prevent burning of cutting edge. Spindle of 20-inch diameter wheel is mounted in permanently lubricated and sealed ball bearings. Spindle drive is through dual V-belts direct from 2-horsepower motor mounted in rear of machine. Coolant tank is located within pedestal and is easily repositioned to provide more or less coolant as required. Tool rest is adjustable to compensate for wheel wear. Wheel dresser is supplied as optional equipment. Made by **Taylor & Fenn Co.,** 54 Arch St., Hartford 1, Conn.

▲ Mention Item NED-4410 when writing ▲

MULTIPLE BARREL TUMBLER

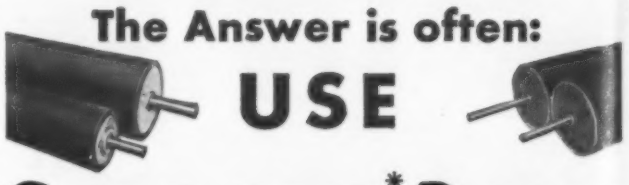
Capable of deburring and polishing up to fifteen different types of items at same time without mixing them, Multi-barrel tumbler is designed for mass-finishing of metal and plastic products. Machine permits simultaneous wet and dry tumbling; affords wide range of speeds; and provides for rotary and centrifugal actions, end-to-end actions and combinations of these to suit requirements. Various degrees of contact and impact can be obtained, and many parts which formerly required hand finishing can be machine processed without danger of deformation.

Circular mounting plate has multiple perforations at six radii for attachment of barrels and is rotated at fixed speed. Barrels of numerous lengths and diameters are of round, hexagonal, clover-leaf or special cross-section and can be furnished with or without Neoprene lining. Made by **Hungerford Corp.,** Big Flats, N. Y.

▲ Mention Item NED-4411 when writing ▲

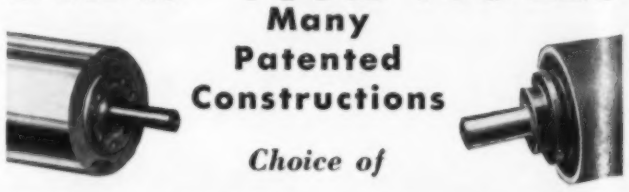
What's YOUR Roll Problem?

The Answer is often:



USE SHAF-TITE* ROLLS

Many Patented Constructions



Choice of

METAL, RUBBER, or WOOD ROLLS

Send For NEW ROLL CATALOG No. 48
Industrial Roll Division

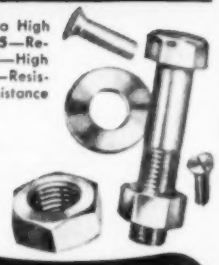
RODNEY HUNT MACHINE CO.
973 Main Street
*Reg. U.S. Pat. Off.
RODNEY HUNT
Orange, Mass., U. S. A.

▲ Mention Item NED-4412 when writing ▲

Check these

13 ADVANTAGES of HARPER Non-Ferrous and Stainless FASTENINGS AGAINST COMMON STEEL

1—Resistance to Rust and Corrosion 2—Resistance to High Temperatures 3—Non-Magnetic 4—Non-Sparking 5—Re-Usable 6—Attractive Appearance 7—Easy to Clean 8—High Strength 9—Long Life 10—Lower Ultimate Cost 11—Resistance to Fatigue 12—Easy to Plate or Finish 13—Resistance to Abrasion and Wear.



6,000 ITEMS IN STOCK

The widest assortment of fastenings in Brass, Bronzes, Copper, Monel and Stainless Steels available from one source. **Write to General Offices, Dept. F for 134-page Color Catalog** giving blue print drawings, dimensions, threads, heads and sizes of each item.

THE H. M. HARPER COMPANY
General Offices and Plant
Morton Grove, Illinois (Suburb of Chicago)
New York Office and Warehouse
200 Hudson Street, New York 13

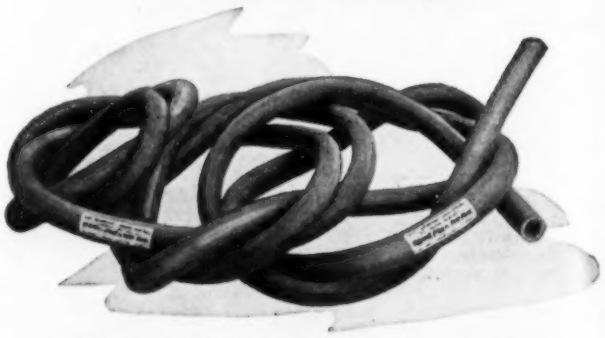
BRANCH OFFICES: Atlanta, Cambridge, Cincinnati, Cleveland, Dallas, Denver, Detroit, Grand Rapids, Los Angeles, Milwaukee, Philadelphia, Pittsburgh, St. Louis, San Francisco, Seattle, Toronto (Canada).

HARPER

EVERLASTING FASTENINGS

▲ Mention Item NED-4413 when writing ▲

Here's Hose "Flexible as a Rope"



Condor HOMO-FLEX HOSE

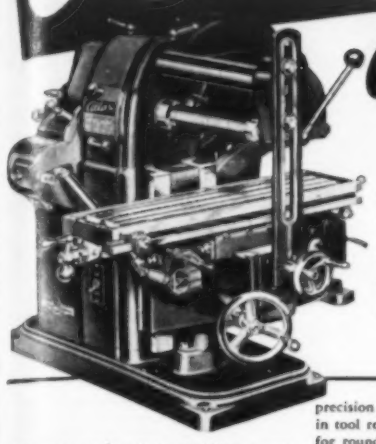
You wouldn't tie your hose in knots like this, but it's reassuring to know you have a hose that can take all the bends and twists of on-the-job use without kinking or breaking down under the strain. Your men, too, appreciate this easy-to-work-with hose, because it's so flexible and light in weight.

Condor Homo-Flex is a truly different hose . . . strong and streamlined. A real Cost Saver in production and maintenance operations. Styles for Air, Oil, Water, Suction, Spray and various other uses. Folder #6879C—yours for the asking.

RM **RAYBESTOS-MANHATTAN, INC.**
MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

▲ Mention Item NED-4414 when writing ▲

SLASH MILLING COSTS!



Atlas MILLING MACHINE

★ Timken bearings
★ Backgeared power
★ V-belt drive
★ 8 spindle speeds
★ 4½"x 18" precision-ground table

You can save hundreds of dollars a year with this Atlas miller on the job for small parts milling.

Its original cost is low — $315 for the Change-O-Matic machine, F.O.B., Kalamazoo, less arbor and motor. It will save many hours a month on set-ups — save on power and operating costs — and free your big machines for the jobs that only they can handle.

The Atlas handles the full range of milling from slabbing and facing cuts to end milling, keyways, finishings, and layout work. It is a precision machine in *every* respect—valuable in tool room or laboratory — ruggedly built for round-the-clock production. Adding air chucks gives you a semi-automatic producer at exceptionally low cost.

Send for new catalog — just off the press — with complete specifications and operating details.

Atlas Press Co.
623 N. PITCHER STREET
KALAMAZOO, MICHIGAN

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

▲ Mention Item NED-4415 when writing ▲

K-P *Spiral Woven Wire* CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanged edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

KP "Keeps Promises"

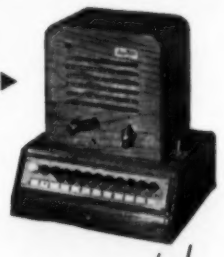
KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers
1501 N. Mascher St.
Philadelphia 22, Pa.

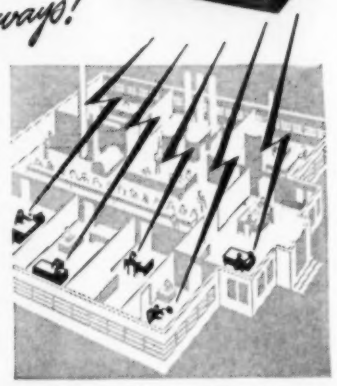
Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

▲ Mention Item NED-4416 when writing ▲

THIS INTERCOM can cut your Operating Costs—

In a dozen ways!





IN THE OFFICE—Executone saves you time and money . . . by stepping up efficiency through interdepartmental communications, by quick exchange of information among all personnel, by eliminating "inside" calls that tie up your switchboard.

IN THE PLANT—by coordinating Production Control, by faster Materials handling, by improved Job Time Keeping—by uses of intercom that probably never occurred to you!

Your Executone Man has all the facts at his fingertips . . . gives you Executone's experience in hundreds of businesses. *Get the entire story*—no obligation.

Write Dept. F-5

Executone
COMMUNICATION & SOUND SYSTEMS
415 Lexington Ave., New York 17, N. Y.

▲ Mention Item NED-4417 when writing ▲

NEW *Processes* AND *Materials*

ANTIRUST PAINT

Suitable for both interior and exterior use by brush or spray, Rustrem Super Aluminum heavy-duty antirust paint can be applied over rust without wire brushing or scraping. It utilizes recently developed aluminum paste which tests indicate to be brighter and longer lasting than those formerly used. It penetrates and seals surface to prevent further rusting and will "leaf" on all types without turning brown under adverse weather conditions. Since its aluminum content is approximately twice that formerly used, it provides extended life for industrial applications. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

▲ Mention Item NED-4418 when writing ▲

GRAPHITE-FILLED NYLON

Particularly well suited for use as dry bearings, Nylatron G graphite-filled nylon rods, cylinders and strip can be used for cams, cam followers, gears, washers, oil seal rings and valve and pump packing. Material is furnished in rod diameters from 0.100 to 2¾ inches, in cylinders from 2 to 7 inches outside diameter with varying wall thicknesses, and in strip from 0.010 to 0.090-inch in widths up to 2 inches. It is generally applicable to conditions involving combination of rubbing and impact or where normal lubrication is impossible. Made by **Polymer Corp.**, Reading, Pa.

▲ Mention Item NED-4419 when writing ▲

FLOOR COATING

Recommended for wood, concrete and metal floors and other surfaces that are subjected to hard wear, this floor coating is based on Vinylite resins that resist dry abrasions and repeated scrubbing with alkali solutions. Unaffected by water, greases, oils, brine alcohols, petroleum solvents, soaps, all alkalies and most acids, this fast-drying enamel provides a slip resistant surface that can be cleaned easily with soap and water. Coating is available in variety of colors and can be applied by brush or spray. Made by **Benjamin Foster Co.**, Girard & Merion Aves., Philadelphia 31, Pa.

▲ Mention Item NED-4420 when writing ▲

Faster Better TIE-MARKING

with PANNIER INSPECTORS HAMMERS

- Hammer head 8" long; machined for good balance
- 18" seasoned wood handle
- Engraved characters on both ends cut ⅛" deep for deeper, more lasting impressions
- Available in standard flat face for crushing end wood fiber; or sharp face for cutting side grain

Pannier Bros., specialists in design, engineering and manufacture of all types of marking equipment, also offer steel inspectors' hammers and a wide variety of dies, stamps, stencils, marking inks and special marking machines to meet any marking problem. Write today for recommendations.

OFFICES
Chicago, Ill.
Los Angeles, Calif.
Youngstown, Ohio
Philadelphia, Pa.

MASTER PANNIER MARKERS
THE PANNIER CORPORATION
301 Pannier Building
Pittsburgh 12, Pa.

▲ Mention Item NED-4421 when writing ▲

Here's why industry PREFERS MOTOAIR vacuum or pressure PUMP

TAKES LESS SPACE
•
HAS LESS PARTS TO WEAR OUT
•

NO DRIVES—NO BELTS—NO HINGED BLADES

Ask for Catalog!

Big enough for tough jobs; designed for day-long, continuous tasks, and years of service, the MOTOAIR PUMP with automatic, visible lubrication and oil-free discharge air, is built in *ONE* compact unit, scarcely larger than the motor it's hooked up to!

805

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

▲ Mention Item NED-4422 when writing ▲

STEEL or BRONZE BACK

BABBITT LINED BEARINGS

Babbitt-lined bearings are ideal for a wide variety of applications. They are "tailor made" in the sense that you have two types of babbitt for the lining . . . lead or tin base . . . and either bronze or steel for the backing.

We can help you make the right selection. Simply tell us what you expect of the bearing.

We will give you the right answer, based on facts, and deliver your requirements . . . on time . . . made to precise specifications . . . and guaranteed to be top quality in every respect. Write today.

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

▲ Mention Item NED-4423 when writing ▲

How to reduce handling weight . . .

SAVE HANDLING DOLLARS!

● One of the surest ways to cut material handling costs is to *move less weight.* Boxes, barrels, cans, trucks, and other receptacles made from Diamond Vulcanized Fibre weigh only 1/16 as much as steel—only ½ as much as aluminum! These tough durable receptacles are non-corrosive . . . oil and grease proof. Moreover, they're *guaranteed* not to crack or splinter.

Send in a trial order for one, two, or a dozen Diamond Fibre Receptacles, today. Write for Catalog R-49.

H 5-48

C-D DIAMOND FIBRE RECEPTACLES
CONTINENTAL-DIAMOND FIBRE CO., NEWARK, DEL.

▲ Mention Item NED-4424 when writing ▲

"HASTE MAKES WASTE"

—as Pop the foreman is impressing on a worker using a coarse double-cut Flat file on a job that properly calls for the smoothing action of a single-cut Mill.

Every machine-shop or production-line filing operation should have the studied selection of *The right file for the job.* In co-operation with trained Nicholson factory representatives, your industrial distributor can be a big help to your production and purchasing departments.

• How many copies each of **"FILE FILOSOPHY"** *(new edition now available)* and technical pamphlet, **"TEN SPECIAL FILE TYPES,"** shall we send you for your own "School of Filing"?

NICHOLSON FILE CO., 34 Acorn Street, Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. **NICHOLSON FILES** FOR EVERY PURPOSE

▲ Mention Item **NED-4427** when writing ▲

Most Powerful 6" SAW does MORE plant work!

New PORTER-CABLE Guild A-6 SAW

Cuts 2" deep

PRICE $65.

Cuts more materials—faster!

Lumber, plywood, plastics, transite. With abrasive wheel, scores tile; even cuts metal sheets.

Just press the trigger of the New Guild A-6 Saw and there's a burst of speed and power *unmatched by any other 6" saw on the market today!*

Compact, lightweight, beautifully streamlined, the Guild A-6 is scientifically balanced for *easier handling . . . less fatigue . . .* and *accurate cutting*, whether on your maintenance, construction or production jobs.

More For Your Money!

- The Guild is cleverly ventilated. Harmful sawdust does not work back to the motor. Escapes through rear opening.
- Air from motor blows dust off cutting line.
- Cutting guide always visible.
- Knob raises or lowers blade for *any depth cut* between 1/8" to 2".
- Extra-broad base for steadier rest on work.
- Two-way rip guide (extra).

Exclusive 3-Way Balance Makes Finest Running Saw

NO TIP! Hold it this way, and the Guild does not nose down. It's in a horizontal, balanced position, ready to cut.

NO TILT! When you hold the Guild this way, it does not tilt sidewise. Again, it's balanced.

NO TWIST! Suspend Guild Saw by a string. It holds steady when starting — No dangerous power twist typical of many saws.

- Helical-gear power drive for highest efficiency.
- Spring unfailingly returns retractable blade guard to protective position.
- Aluminum alloy frame—die cast.
- Weighs only 12 lbs. Rugged, quality-built throughout.

SEE the Guild Saw today! At Leading dealers, or write us for information.

PORTER-CABLE MACHINE CO.
1926 N. Salina St. Syracuse, N. Y.
Manufacturers of SPEEDMATIC and GUILD Electric Tools

▲ Mention Item **NED-4428** when writing ▲

New Processes & Materials

PACKAGING TAPE

Designed for packaging metal pipes, rods, sheets and coils by being wrapped once around load and back on itself, Scotch brand filament tape for heavy-duty packaging employs acetate film backing instead of paper. This tape is waterproof and thinner than paper-backed filament tape manufactured by same company. Packages which are banded with it slide easily. Acetate film tape calipers 0.007 to 0.009-inch as compared with 0.013 to 0.015-inch for paper-backed type. It has tensile strength of 180 pounds per square inch per inch of width and tear resistance greater than 1600 gram-centimeters. Tape needs no application equipment since its pressure-sensitive adhesive grips immediately upon contact. It can be obtained in either black or transparent. Made by **Minnesota Mining & Mfg. Co.,** Dept. NED-SW, 900 Fauquier St., St. Paul 6, Minn.

▲ Mention Item **NED-4429** when writing ▲

MASONRY-METAL COATING

Protecting concrete brick and porous masonry surfaces with coating that does not check, crack or dust, Oncrete for Concrete synthetic moisture-repellent coating also provides rust-resistant, corrosion-preventing, heat-withstanding finish on metal surface. Suitable for inside or outside applications, it contains virtually no oils or driers and is immune to alkali. Ability to withstand temperatures up to 500° F. makes it usable in boiler rooms. Coating withstands repeated scrubbings as it is not affected by caustic detergents, and it will resist sulphuric acid up to 50 per cent diultion and nitric acid up to 10 per cent. Available in variety of colors, coating dries in 3 to 4 hours. Made by **Lowebco, Inc.,** Dept. NED, 1525 E. 53rd St., Chicago 15, Ill.

▲ Mention Item **NED-4430** when writing ▲

WELDING KIT

Designed as portable accessory for gas welding equipment in plants, factories, quarries, mines and foundries, compact Doc Alloys welding kit provides ample supply of silver solder, ten different types of low temperature welding rods, low temperature galvanizing powder and eight fluxes from which operator can choose one required for job. It is supplied in 2 x 4½ x 20½-inch metal box with rods individually color marked in labeled pockets of leatherette roll. Flux jars are labeled, and complete set of instructions as well as chart of contents with practical working directions are included. Made by **All-State Welding Alloys Co.,** 273 Ferris Ave., White Plains, N. Y.

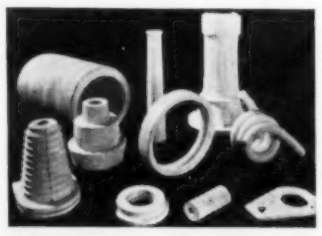
▲ Mention Item **NED-4431** when writing ▲

COLORED NYLON PLASTICS

For industrial applications such as stop-nuts, rivets, strain-relief bushings, washers, gears and bearings, molding powders of nylon plastics are available in range of 13 colors designed to aid identification of component parts. Colors are incorporated directly in material and withstand high temperature at which nylon is molded. Colored forms of nylon have all properties of plastic in its natural color including heat resistance that permits sterilization of products by steam. Made by **E. I. du Pont de Nemours & Co.,** Wilmington 98, Del.

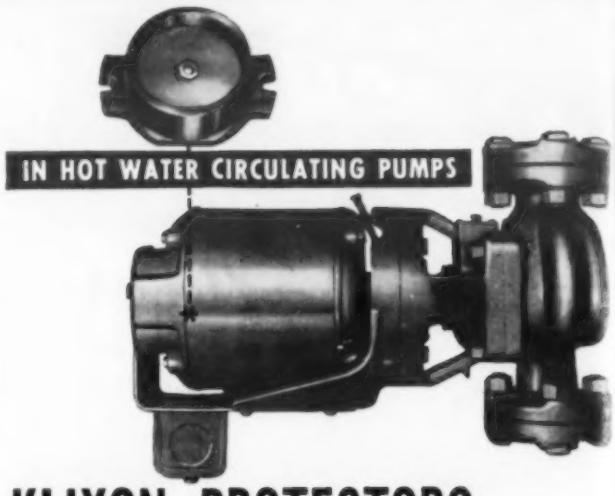
▲ Mention Item **NED-4432** when writing ▲

SILICONE RUBBER PARTS



Suitable for extremely low temperature applications, X-6 silicone rubber gaskets, diaphragms, sleeves, packings, channels and numerous other molded, extruded, punched and die or lathe cut parts can be supplied to user's specifications. Brittle point of this material, measured on ⅛-inch thickness in accordance with ASTM D736-43T, ranges from −150 to −170° F. This synthetic rubber is resistant to action of sulphur dioxide, liquid ammonia and certain types of Freon as well as many chemicals and oils. Parts are suitable for high and low voltage applications, have high resistance to ozone and feature water repellency. Made by **Stalwart Rubber Co.,** 151 Northfield Rd., Bedford, O.

▲ Mention Item **NED-4433** when writing ▲



KLIXON PROTECTORS

Keep Motors Working by Preventing Burnouts

A Klixon Protector, incorporated into the motor of equipment such as circulating pumps, helps keep the unit operating by eliminating possible motor burn-outs.

The Klixon Protector takes into consideration such motor destroying factors as overloading, low line voltage, poor ventilation...anything that causes the motor to overheat . . . and prevents motor burnouts by cutting "off" the power should the motor become dangerously overheated. Temporary overloads do not cause nuisance tripouts.

Remember, too, Klixon Protectors keep transformers, solenoids, variable voltage transformers and other electrical equipment from becoming overheated and burning out.

KLIXON **SPENCER THERMOSTAT DIVISION**
Metals & Controls Corporation
1906 Forest St., Attleboro, Mass.

▲ Mention Item **NED-4434** when writing ▲

SKYCO NO-GLARE

SKYCO NO-GLARE acts like a sun shade over your plant because it keeps out glare, admits 94 per cent of the natural light and reduces inside summer temperatures approximately 15 per cent. SKYCO NO-GLARE is light blue and may be brushed or sprayed. It is easily removed when necessary, and very economical . . . single gallons $4.00, 5 gallon pail $3.75 per gallon, f.o.b. Cleveland. Orders shipped the same day received. Order a trial supply today.

Used for Over 20 Years and Manufactured Only By

THE SKYBRYTE COMPANY
3127 Perkins Ave. ★ ★ ★ Cleveland 14, Ohio

▲ Mention Item **NED-4435** when writing ▲

Large enough for most work . . . Small enough to do it Profitably!

SHELDON L-44 10½" SWING

ACTUAL SIZE OF HOLE THRU SPINDLE

SHELDON TS 56B 11½" SWING

ACTUAL SIZE OF HOLE THRU SPINDLE

Most lathe work is of relatively small diameters. Still much of it is done on large and costly lathes with a resulting loss of profit from: High power cost, floor space and overhead loadings. Such "wastes" can be switched to profits by using modern Sheldon Precision Lathes. Lighter, faster, easy to operate with "Zero Precision" Taper Roller bearings (the most accurate made) they hold close tool room tolerances or stand up to continuous high speed operation at full capacity.

Built in a modern machine tool plant that is equipped with the latest lathe building equipment, they are moderate in price, hence pay out in a very short time.

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
4215 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.

▲ Mention Item **NED-4436** when writing ▲

New "AIR WARDEN" Unit

IT DOES THE COMPLETE JOB!

LUBRICATOR • FILTER • PRESSURE REGULATOR • LUBRICATOR • FILTER • PRESSURE REGULATOR • LUBRICATOR • FILTER • PRESSURE REGULATOR • LUBRICATOR

1. **FILTERS AIR**—This new Hannifin unit for conditioning compressed air gives you everything you want for protection and control of air operated equipment. Micronic type filter removes grit, dirt, and scale, as well as moisture and emulsified oil.

2. **REGULATES PRESSURE**—Set the pressure where you want it and the Hannifin *"Air Warden"* regulator does the rest! No danger of pressure build-up. Easy to "back off." Quick acting, durable, and dependable.

3. **LUBRICATES**—The modern way to lubricate air operated cylinders and tools. Atomizing type lubricator adds right amount of oil when air flows. Ask for information about the complete unit. Filters, regulators, and lubricators also available separately. Sizes ⅜" and ½". HANNIFIN CORPORATION, 1101 SO. KILBOURN AVE., CHICAGO 24, ILLINOIS.

a HANNIFIN Product

FILTER • PRESSURE REGULATOR • FILTER • PRESSURE REGULATOR

▲ Mention Item NED-4437 when writing ▲

Johansson BROWN & SHARPE

Johansson Gage Blocks

NOW AVAILABLE THROUGH BROWN & SHARPE DISTRIBUTORS

These famous precision standards of industry are conveniently accessible through Brown & Sharpe Distributors the world over. Thus, industry is assured a continuing dependable source of supply for JO-BLOCKS and Accessories.

The Brown & Sharpe name is industry's guarantee that the traditional precision of Johansson Gage Blocks and Accessories will be maintained without compromise. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

We urge buying through the Distributor

BROWN & SHARPE

▲ Mention Item NED-4438 when writing ▲

FOR PROOF BEYOND COMPARE

Send for

RUBYFLUID

Soldering Flux

Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid

Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—

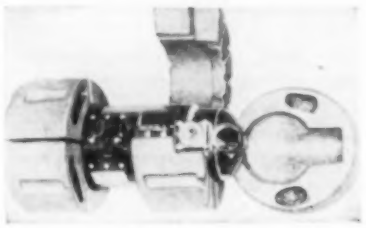
Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

Rubyfluid

▲ Mention Item NED-4439 when writing ▲

New Processes & Materials

PROTECTIVE PACKAGING



Products of any size and round, square, oval, rectangular or combination of these shapes can be effectively protected in transit by molded wood-pulp packaging medium. For square and rectangular items, standard corner pieces provide necessary protection. Shock cushions are placed in four corners of crate or carton, unit is set on them, and additional four are placed around top corners of product before top is secured. Material is especially molded to fit other shapes. Custom-made units are fitted around product which is then crated, ready for shipment. Made by **Pulp Reproduction Co.**, 3000 W. Clarke St., Milwaukee 10, Wis.

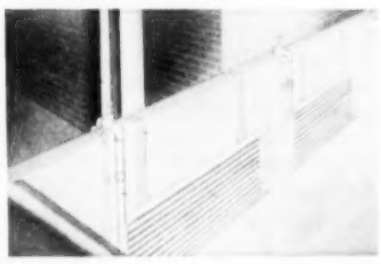
▲ Mention Item NED-4440 when writing ▲

SILICONE INSULATING RESIN

Having general application for impregnating spun glass and asbestos wire coverings and for binding coils, windings and other motor, generator and transformer parts, No. 9989-1 thermosetting silicone insulating resin permits electrical equipment to operate at temperatures as high as 180° C. Possessing high dielectric strength, water resistance and heat resistance, it dries tack-free in less than 30 minutes at relatively low temperature and can be cured to tough flexible film. It has solids content of 60 per cent and average viscosity of 200 centipoises at 25° C. Material can be used as supplied or thinned with petroleum spirits or VM & P naphtha. Made by **General Electric Co.**, Chemicals Div., 1 Plastics Ave., Pittsfield, Mass.

▲ Mention Item NED-4441 when writing ▲

HEATING & COOLING COIL



Available in cold-rolled steel, stainless steel and Monel metal, Platecoil heating and cooling coils for plating, degreasing, pickling and anodizing tanks can be used to replace conventional pipe coils. By using embossed metal plates permanently welded together, several advantages are provided including high British thermal unit capacity per square foot of area, rapid even heat transfer, small coil space, easy installation and low maintenance cost. These coils can be removed and replaced by new units without shutdown of tanks. Made by **Udylite Corp.**, 1651 E. Grand Blvd., Detroit 11, Mich.

▲ Mention Item NED-4442 when writing ▲

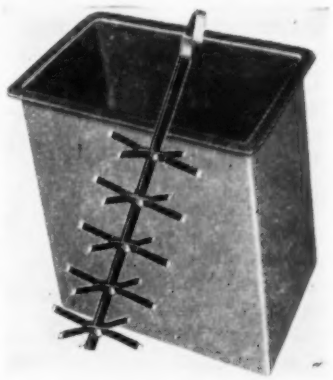
FLOOR ENAMELS

Available in Pewter gray and Tile red, alkali-resistant floor enamels are rubber-base products for use on interior cement floors where conditions of dampness, moisture, alkali or combination of these elements are unusually severe. They are specifically recommended for use on areas located near chemical tanks, bottling machines and similar areas where exposure conditions are often abnormal. Enamels can be applied by either brush or spray equipment.

Companion product, Solvent Reducer, is available for removing wax and grease from areas prior to painting and can be used as thinner for rubber-base enamels and for cleaning brushes or spray equipment. Made by **Pittsburgh Plate Glass Co.**, 632 Duquesne Way, Pittsburgh 22, Pa.

▲ Mention Item NED-4443 when writing ▲

COATING FOR PLATING RACKS



Combining resistance to corrosive solutions with toughness and high adhesive strength, Universal plastic coating for plating racks gives long service through copper, nickel, chrome, cadmium, zinc and other cleaning and plating cycles. Coating is composed entirely of solids, is chemically inert and requires no thinners or reducers for application. One dip forms heavy coating of uniform thickness which is heat cured at temperatures above 350° F. It does not soften in hot plating solutions. Made by **Belke Mfg. Co.**, 947 N. Cicero Ave., Chicago 51, Ill.

▲ Mention Item NED-4444 when writing ▲

HOUGHTON'S

ABSORBED OILS

100 – 500 SERIES

offer you these advantages:

1 High melting point.
2 Maximum stability—no tendency to separate, gum or harden.
3 High in lubricating ability and in adhesion to metal surfaces.
4 Anti-corrosive; neutral in reaction; free from moisture.

Houghton's Absorbed Oils are made to provide an effective lubricating film between the balls or rollers and their retaining cages. These are reversible soda-soap greases which may be heated and cooled repeatedly without change. Write for folder.

E. F. HOUGHTON & CO.
303 W. Lehigh Ave., Phila. Pa.

Photo Courtesy SKF Industries, Inc.

▲ Mention Item NED-4445 when writing ▲

. . . JUST TRY 1

MOCCASIN BUSHING

on your most

TROUBLESOME BEARING

The success of Moccasin Bushings efficiency lies in their unique lubrication principle. Oil is drawn from a reservoir in the bearing housing and is distributed by capillary action in a continuous, unbroken film over the entire bearing surface. Drippage and seepage of oil is entirely eliminated, and under ordinary circumstances they require attention only two to four times a year—just try one on your most troublesome bearing. Guaranteed for satisfactory service. Write for folder No. 429 showing nine other styles of bushings.

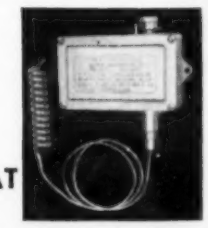
Moccasin
BUSHING COMPANY
CHATTANOOGA TENNESSEE

▲ Mention Item NED-4446 when writing ▲

UNITED Electric Controls Company

Standard & Special Thermostats & Pressure Switches

TYPE W THERMOSTAT



Provides Automatic Control For Ovens, Hot Plates or Liquid Baths

The Type W Thermostat is an adjustable short-range control developed to automatically maintain critical temperatures within close limits. It is especially suited for controlling ovens, incubators, liquid baths, hot plate presses, cold cabinets, as well as food and drink vending machines.

The Type W thermostat is a remote bulb-type employing a highly sensitive, solidly liquid-filled bulb and hydraulically-formed brass bellows to actuate a positive snap action switch. It can be furnished calibrated for any range, depending on the thermal assembly used, between the limits —120° F. to 600° F. and with fixed, uniform differentials to suit the application. Electric ratings on the standard model are 10 amp 125 V AC and 5 amp 250 V AC. Special models up to 25 amp 125 V AC are available. Write for bulletin containing full details.

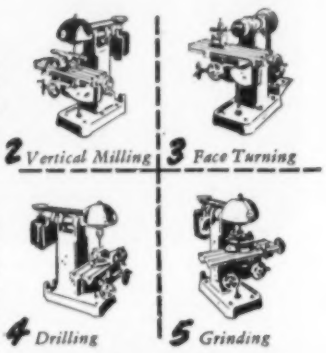
UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

▲ Mention Item NED-4447 when writing ▲

One BENCHMASTER ANSWERS Five EVERY-DAY SHOP REQUIREMENTS

Your little Benchmaster pinch-hits for almost any tool in the shop, saving time, eliminating the need for extra machines, cutting your costs to the bone.

1 Horizontal Milling



With its two interchangeable spindles, Benchmaster mills both HORIZONTALLY and VERTICALLY; serves as a GRINDER, DRILL PRESS or LATHE. In fact, BENCHMASTER is almost a complete shop in itself!

Good, husky spindle construction with Timken Tapered Roller Bearings is one answer to Benchmaster's extra versatility. Built to .001" tolerance, Benchmasters are precision fitted in every part, assuring surprising accuracy and metal-removing ability—whether it's *milling, drilling, turning or grinding!*

GET THE FACTS ON BENCHMASTER NOW!

Write Dept. NED-6 for circular.

benchmaster MANUFACTURING COMPANY 3955 WEST PICO BOULEVARD LOS ANGELES 6, CALIFORNIA

WORLD'S LARGEST PRODUCER OF SMALL PUNCH PRESSES

Mention Item NED-4448 when writing

91-28 VAN WYCK BLVD., JAMAICA 1, N. Y.

Mention Item NED-4449 when writing

A NEW Electronic-tube unit

Lepel HIGH FREQUENCY HEATING UNITS

Lepel announces, as an addition to its line of spark-gap equipments, a new tube unit that is the last word in high-frequency heating equipment of the electronic-tube type. Designed by engineers who are high-frequency specialists, exclusively, it combines in its all-steel cabinet *all* of the latest improvements *and* all proved features of this type of equipment. Rating: 20 kw output.

It is suitable for heating *non-ferrous* as well as ferrous materials to *any* desired temperature.

- This new unit is extremely flexible: Will operate all commonly used types of load coils efficiently, with flexible or rigid leads up to eight feet long.
- It is easily adjusted to any load; requires no matching transformers or condensers; and can be used for hardening, soldering, brazing or *melting*.
- All components, including the industrial-type heavy-duty tubes, are ultra-conservatively rated.
- Consumes only one gallon of water per minute when idling, less than five at full load.

A letter will bring you full information on this new unit and on the recently redesigned Lepel all-steel spark-gap equipments.

LEPEL HIGH-FREQUENCY LABORATORIES
39 WEST 60th STREET, NEW YORK 23, NEW YORK

Mention Item NED-4450 when writing

New Processes & Materials

BEARING LUBRICANT

Providing clean stable lubricant of suitable composition and consistency to assure effectiveness over wide temperature range without separation, drying out or hardening, this stability-tested grease can be used for lubricating grease-packed bearings as well as unsealed bearings. It is insoluble in water, will not emulsify or aerate in presence of moisture and is highly resistant to oxidation in storage. Grease is supplied in tubes for convenient servicing of bearings in plant and field and in larger containers where greater quantities of grease are required. Made by **Norma-Hoffmann Bearings Corp.,** 60-61 Hamilton Ave., Stamford, Conn.

Mention Item NED-4451 when writing

WAX AND OIL SOLVENT

Having relatively high flash point, VS wax and oil solvent is noncorrosive, noninjurious to skin and can be used safely to remove oil treating chemicals, wax, grease, 'lube' oils, extreme pressure lubricants and paint from skin, wood or metal surfaces. It can be used also as general solvent where slight blue discoloration is not objectionable. Solvent can be obtained in 55-gallon drums and 5-gallon cans. Made by **Visco Products Co.,** City National Bank Bldg., Houston 2, Tex.

Mention Item NED-4452 when writing

ELECTRICAL TAPE

Providing high dielectric strength, abrasion resistance and protection against oils and acids, Scotch electrical tape No. 33 is listed by Underwriters Laboratories for temperatures as high as 176° F. Made with a plastic backing, tape is 7 mils thick, has dielectric strength of more than 7000 volts and 125 per cent stretch. It adheres readily to plastic wires, is impervious to moisture and affords protection against electrolysis and corrosion. Made by **Minnesota Mining & Mfg. Co.,** Dept. NED-SW., 900 Fauquier Ave., St. Paul 6, Minn.

Mention Item NED-4453 when writing

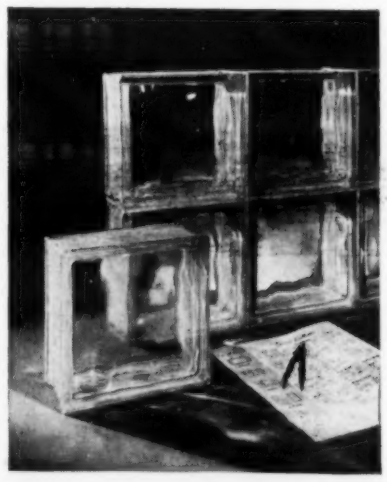
SEALING MATERIAL

Offering high resistance to pressure, chemical action and heat, improved Felseal coating permits use of inexpensive base materials, even for severe oil, fuel and solvent applications. High plastic flow of seal under moderate flange pressures eliminates need for machining, as castings and machined parts are sealed efficiently without using finishing cut or surface grinding.

Coating can be applied to any fibrous base material in film thicknesses of 0.001 to 0.005-inch. Base materials such as chipboard, treated paper and fiber are supplied in thicknesses of 0.010 to 0.125-inch. Usable for applications where high service temperature, extreme cold, fixed gases or solvents are present, this modified polysulphide elastomeric coating is not affected by mineral or vegetable oils, fats or soaps, aliphatic and aromatic hydrocarbons, lower alcohols, carbon tetrachloride or dilute acids and bases. It will not corrode or stain alloys, copper or aluminum. Made by **Felt Products Mfg. Co.,** Dept. P 53, 1508 Carroll Ave., Chicago 7, Ill.

Mention Item NED-4454 when writing

DECORATIVE GLASS BLOCK



Made of crystal-clear transparent glass, Random Clear glass block has subtle irregularities in contour of faces which give cool, sparkling appearance of melting ice. Though machine-made by precision processes, block has appearance of hand-finished product. This is achieved by using several slightly dissimilar molds to form the two halves of block and then using different combinations of halves. It is possible to build panels of nearly 100 blocks in which no two block faces are identical. Designated Insulux glass block No. 331, it is especially adaptable for decorative purposes, and it harmonizes with contemporary architecture of all types of buildings. Distributed by **American Structural Products Co.,** Toledo 1, O.

Mention Item NED-4455 when writing

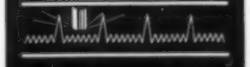
MULTIPRESS REG. U. S. PAT. OFF.

✓ LOWERS TONNAGE
✓ IMPROVES QUALITY
✓ REDUCES COSTS with EXCLUSIVE VIBRATORY REPEAT STROKES

Eliminating trapped air, improving metal flow, eliminating laminating in parts formed of loose material, sharper detail on coined or embossed parts, and in many cases reducing tonnage requirements—these are only a few of the many advantages gained through use of Denison exclusive Vibratory HydrOILic Pressure.

Perhaps this offers a better answer to some of your production problems. Why not let our test-lab check your job with vibratory repeat stroke? Write for full details.

What is VIBRATORY Hydraulic Pressure?



Uniform repeat strokes widely regulative, through a stepless range, in number, length and tonnage. The ram will descend, make short repeat strokes, and cycle automatically or by manual control.

Above are some of the many products—from pencil clips to sterling silver dishes—on which vibratory pressure is cutting costs through better coining, forming, drawing, embossing, swedging and other operations.

The DENISON Engineering Co.
1151 Dublin Road
Columbus 16, Ohio

DENISON HydrOILics

Mention Item NED-4456 when writing

"JUST A SNAP" FOR BOTH AC AND DC

QUICK READINGS WITHOUT BREAKING CIRCUIT Instant current readings by merely placing the tongs around the electrical conductor—without breaking circuit or insulation. It's safe, convenient and accurate. Tong Test is the only ammeter of its type that can be used on both AC and DC. Cannot burn out for it has no windings. Interchangeable scale ranges up to 1000 amperes. Five types to accommodate cables up to 3 7/8", bus bars up to 4 1/2" x 1/2". Voltage readings, too, with the Voltor Attachment.

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

Mention Item NED-4457 when writing

You save money with Robins Idlers on your conveyors because of these three important features:

1. **One-Shot Lubrication.** Half the time to lubricate. You need only one walkway.
2. **Triple-Grease Seal.** Seals grease in . . . locks dirt out. Exclusive! Patented!
3. **Rigid Truss Construction.** Stronger than any other type.

You can get immediate delivery of standard sizes. Write today for Robins Idlers Bulletin No. 120-A1.

ROBINS HR IDLERS

ROBINS CONVEYORS DIVISION
HEWITT-ROBINS INCORPORATED, PASSAIC, NEW JERSEY

Mention Item NED-4458 when writing

Why waste time dusting when you can eliminate abrasive dusts with

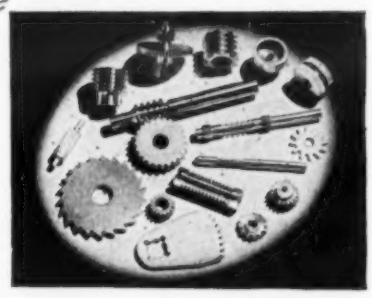
TORIT DUST COLLECTORS

TORIT Dust Collectors completely filter abrasive dusts from the air around grinding, cut-off and polishing machines. They are self-contained and portable, easy to install, and simple to operate and maintain. Over 15,000 are now in use in every type of industry. TORIT Dust Collectors improve working conditions and protect valuable machinery. Made in sizes and models to fit all standard machines, they are very economical to own and operate. For complete details and the latest TORIT catalog write:

TORIT MANUFACTURING CO.
298 Walnut St. • St. Paul 2, Minn.

▲ Mention Item NED-4459 when writing ▲

a little "pitch" talk about Abart gears



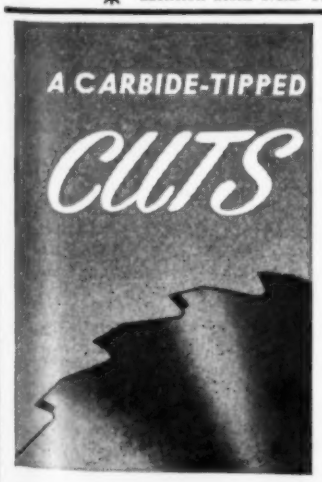
But not the type from the man in the loud checked suit. Rather, something about diametral pitch—at which ABART is a specialist. Each type of gear in the ranges listed below is custom-cut to your specifications. No stocks. Precision made and long lasting. Fabricated from any metallic or non-metallic material. Immediate attention on your order, whether it's large or small.

SPUR—96 D.P. to 5/7 D.P. ¼" P.D. to 18" P.D.
BEVEL—48 D.P. to 5/7 D.P. Max. P.D. 6¼"—max. ratio 4:1
WORMS—32 D.P. to 5/7 D.P. ½" P.D. to 5" P.D.
WORM WHEELS—32 D.P. to 5/7 D.P. 1" P.D. to 14" P.D.
HELICAL & SPIRAL—96 D.P. to 6 D.P. up to 14" P.D.
SPROCKETS — 1¼" dia. to 14" dia.

NO STOCK GEARS—NO GEAR CATALOG.
Send B/P, Sample or Specifications Today for Prompt Quotation.

ABART GEAR & MACHINE CO.
4822 W. 16th St. Chicago 50, Ill.

▲ Mention Item NED-4460 when writing ▲

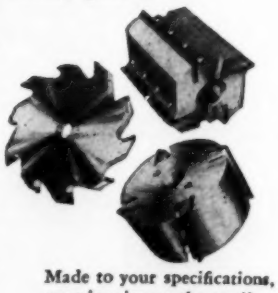


MEYCO SAW . . . PLASTICS, WOOD & COSTS

● If you can do a job FASTER and at LESS COST, you will obviously SAVE MONEY in your wood manufacturing processes.

GROOVING TOOLS, STICKER AND SHAPER KNIVES

● Meyco carbide tipped cutters generate less heat than steel tools, are fed into the work easier and faster, last an unbelievably longer time and produce smoother finishes, often eliminating a sanding or polishing operation.



Made to your specifications, your inquiry on the application of these tools, or on costs is invited. 19

60 YEARS OF FINE CUTTING TOOLS
W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ Mention Item NED-4461 when writing ▲

NEW Literature AND Catalogs

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

Floor Chain Conveyor

Jervis B. Webb Co.—4-page illustrated folder provides information on Towveyor continuous chain conveyor with chain running in steel slot below floor. For use with standard four-wheel and two-wheel trucks, trailers and dollies, conveyor facilitates fast and economical handling of packages, boxes, barrels, tote boxes and parts.

▲ Mention Item NED-4462 when writing ▲

Metal Stampings

City Auto Stamping Co.—20-page illustrated brochure presents information on company's facilities for producing metal stampings used by automotive field and those making farm tractors and equipment, refrigerators, washing machines, power tools, metal furniture and home appliances.

▲ Mention Item NED-4463 when writing ▲

Powdered Metal Fabrication

Powdered Metal Products Corp. of America—8-page illustrated booklet entitled "Powdered Metal in Your Production Picture" discusses broad range of new applications for powdered metal fabrication processes.

▲ Mention Item NED-4464 when writing ▲

Marking Devices

Wm. A. Force & Co.—Uses, styles and sizes of Base-Lock interchangeable rubber type are featured in 16-page illustrated catalog entitled "Force Industrial Rubber Type & Accessories." Price markers, self-inking roller markers, case numberers, office printing presses, rubber stamp inks, stamp pads, pocket stamps, stencil brushes and mailing pens are described also.

▲ Mention Item NED-4465 when writing ▲

Electric Heating

Industrial Engineering & Equipment Co.—Illustrated plastic-bound catalog entitled "Electric Heating Elements & Equipment" covers uses, construction features, advantages, dimensions and prices of electric strip, flat type, cartridge, immersion and air heaters; hot plates; and thermostat and control equipment.

▲ Mention Item NED-4466 when writing ▲

Power Transmission Equipment

Chicago Die Casting Mfg. Co.—12-page illustrated catalog No. 49D contains complete information on single-grooved, V-grooved step, multiple-drive, flanged and crown face pulleys; shaft collars and supports; pillow blocks; journal bearings; flexible couplings; speed reducer; motor attachments for grinding and buffing; grinding and buffing mandrels and adjustable shop spot lights.

▲ Mention Item NED-4467 when writing ▲

Materials Handling

LYON-Raymond Corp.—32-page illustrated booklet entitled "This Is Greene, N. Y." furnishes information on company's location, management and policies. Among products described are hydraulic lift truck, pallet lift truck, elevating table, sheet and strip feeding tables, pumps and tote pan lift truck.

▲ Mention Item NED-4468 when writing ▲

Steam Specialties

Strong, Carlisle & Hammond Co.—32-page illustrated catalog No. 68A contains information on line of steam traps, strainers, reducing valves and separators as well as specifications and recommendations for most efficient use of these products in typical applications.

▲ Mention Item NED-4469 when writing ▲

Low Temperature Alloys

Cerro de Pasco Copper Corp.—Illustrated data sheets deal with such subjects as physical properties and composition of Cerro low temperature alloys; casting procedure; how to make chuck jaws; and bending thin-walled tubing, molding and extruded shapes.

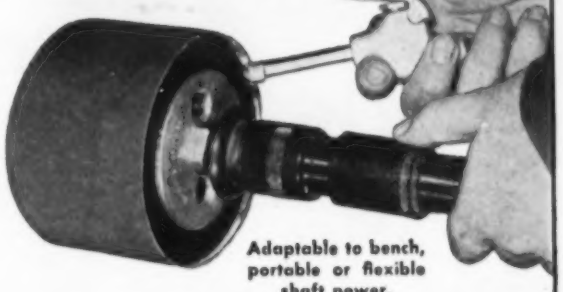
▲ Mention Item NED-4470 when writing ▲

Radioactivity Instrumentation

Nuclear Instrument & Chemical Corp.—32-page illustrated catalog J discusses instrumentation for radioactivity measurement and describes wide range of instruments and accessories, applications and manufacturing methods.

▲ Mention Item NED-4471 when writing ▲

NEW IMPROVED NU-MATIC GRINDER



Adaptable to bench, portable or flexible shaft power.

SANDS • GRINDS • BUFFS

The NEW IMPROVED NU-MATIC GRINDER cuts costly grinding operations. Uses standard 3½" x 5" dia. abrasive bands that can be changed from roughing to finishing in a matter of seconds. Works equally well on irregular, curved or flat surfaces. Adapters for ⅝"-11 or ½"-13 power equipment. (Specify Size.)

An inexpensive time and money saving tool.

NU-MATIC GRINDERS, INC. • 10304 W. McNICHOLS RD.
Detroit 21, Mich. UNiversity 3-2573

▲ Mention Item NED-4472 when writing ▲

of the New VARGLAS TUBING

impregnated with Permafil*

Take a short length of this new Varglas Permafil Tubing. Bend it, twist it, tie it in knots. Extremely pliable, isn't it? And remember, excessive flexing won't destroy its dielectric property (7,000 volts). Check its solvent resistance — you'll find it relatively immune to alcohol . . . only slightly affected by long exposure to petroleum and aromatic hydrocarbons. Now apply heat. Varglas Permafil Tubing stands 2,000 hrs. at 105° C . . . more than 1,000 hrs. at 125° C. Can be after-treated in baking and varnishing processes, too. *A General Electric product.

● Verify these outstanding characteristics of Varflex Permafil Tubing yourself. Send for complete data and your free working sample today.

VARFLEX CORPORATION
310 N. Jay St. Rome, N. Y.

▲ Mention Item NED-4473 when writing ▲

SET SCREWS MUST STAY PUT

TO MAKE SURE THEY DO USE

UNBRAKO
Reg. U. S. Pat. Off.

Pat'd.

SELF-LOCKERS!

No matter what the application, set screws must "stay put". To make sure they do, more and more designers and manufacturers are specifying our patented "UNBRAKO" Self-Lockers. They positively won't shake loose, no matter how chattering the vibration.

And remember, we can lock practically any set screw application, regardless of the type of point required. *Knurling does it*—ask us how!

These screws are not carried in stock. Prices on application.

Knurling of Socket Screws originated with "Unbrako" in 1934.

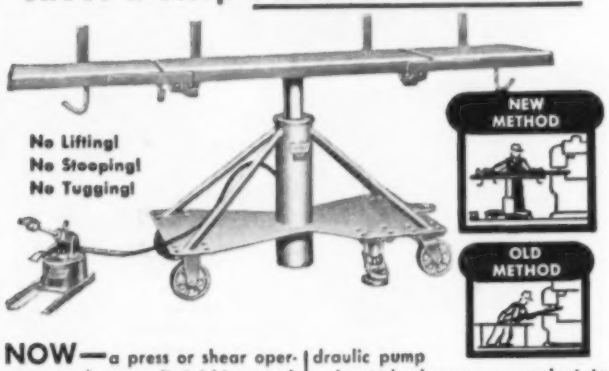
OVER 46 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PA., BOX 581
Chicago • Detroit • St. Louis • San Francisco

▲ Mention Item NED-4474 when writing ▲

SAVE HANDLING

by LYON-Raymond Hydraulic Sheet & Strip FEEDING TABLES



NOW—a press or shear operator can keep a diminishing stack of material constantly at the perfect feeding level.

✔ No need to lift, or stoop, or tug, or haul. He just *slides* each sheet or strip into position easily, quickly, safely..

✔ Doesn't have to leave his position! A pedal-operated hydraulic pump — located wherever convenient to the operator — elevates the table as the feeding operation requires.

✔ Models of 2,000, 4,000, 6,000 and 10,000 lb. capacities, non-tilting (for horizontal bed presses) or adjustable tilting top (for inclined presses). Various standard size table tops.

WRITE — Here's money-saving information on this shop-proved LYON-Raymond sheet feeding table. Folder sent free, without obligation, on your request.

LYON-Raymond Corporation
799 Madison St. Greene, N. Y.

Mention Item NED-4477 when writing

ANOTHER MATERIALS HANDLING FIRST

NEW

Now you can ride the walking type "Jack Lift"

MULTIPLY MANPOWER LEWIS-SHEPARD

SAVES LEG WORK on the long hauls . . . Saves money all around the plant . . . on regular runs . . . in cramped quarters or narrow aisles.

REDUCE COSTS with this easy-maneuvering "Standrive" dependable "JackLift" Electric Truck. Operator rides or walks. Operates truck with handle in every position . . . All controls in the handle head . . . Instant smooth-action electric brake.

Platform and Pallet models — capacities 4000 and 6000 lbs. Tractor model for trailer trucks. Low maintenance. High efficiency. Long life.

For complete information write...

LEWIS-SHEPARD PRODUCTS INC.
582 WALNUT STREET, WATERTOWN 72, MASSACHUSETTS

MIDWEST PLANT CRAWFORDSVILLE, IND.

"STANDRIVE" POWER FORK TRUCKS * "JACKSTACKER" ELECTRIC TIERING TRUCKS "JACKLIFT" ELECTRIC TRUCKS * STACKERS * CRANES * SKIDS * PALLETS HYDRAULIC AND MECHANICAL HANDLIFT TRUCKS * FLOOR TRUCKS * RACKS

Mention Item NED-4478 when writing

IF YOU WANT

ELECTRONIC HEAT CONTROL...

SEND FOR THIS BOOK

Here's the story of the simplified, moderately priced Alnor Electronic Pyrometer Controller.
This bulletin describes several of the many advantages in automatically controlling or maintaining heat in industrial furnaces, ovens and kilns—in fact, in all heating devices using electricity, gas or oil. The Alnor Controller is made by instrument technicians, is sensitive enough for laboratory use, rugged enough for grueling industrial service. Today, while you are thinking of it, send for Bulletin No. 3197-C. ILLINOIS TESTING LABORATORIES, INC., Room 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Mention Item NED-4479 when writing

New Literature—Continued

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

Belting

Manheim Mfg. & Belting Co.—4-page illustrated folder is descriptive of Veelos balata belting for power transmission, elevating and conveying applications. Made from specially woven cotton duck thoroughly impregnated with pure balata gum and prestretched to full limit, belting is particularly suited for handling sand, clay, cement, tile and similar materials under either wet or dry conditions.

Mention Item NED-4480 when writing

Dielectric Heaters

Allis-Chalmers Mfg. Co.—Available in sizes from 100 watts to 125 kilowatts, dielectric heaters and auxiliary equipment are explained in 12-page illustrated bulletin No. 15B6431A. Portrayed are such applications as forming and drying insulation collars, thermoplastic sealing, heating plastic preforms, twist setting of rayon tire cord and processing plywood panels.

Mention Item NED-4481 when writing

Resin

Goodyear Tire & Rubber Co., Chemical Div.—36-page illustrated booklet contains information on manufacture, properties, formulation and uses of Pliolite S-5 high styrene-butadiene resin recommended for use in chemically-resistant coatings.

Mention Item NED-4482 when writing

Oil & Coolant Filtering

Honan-Crane Corp.—Four illustrated booklets give complete story on value of filtering oils and coolants used in metalworking operations such as cutting, grinding, boring, honing and quenching.

Mention Item NED-4483 when writing

Wire Rope Slings

A. Leschen & Sons Rope Co.—12-page illustrated bulletin No. FLS-49 describes Hercules Flat-Laced wire rope slings for use where sling comes in contact with load and for choker sling service.

Mention Item NED-4484 when writing

Fluorescent Lamp Ballasts

General Electric Co., Specialty Transformer & Ballast Div.—20-page illustrated bulletin No. GET-922-B gives complete information on installation, operation and testing of ballasts for fluorescent lamps.

Mention Item NED-4485 when writing

Electric Control Devices

Ward Leonard Electric Co.—Illustrated catalog containing over 200 pages gives technical data on company's line of resistors, rheostats, relays, contactors, motor starters and controllers and control accessories.

Mention Item NED-4486 when writing

Casting Operations

Monarch Aluminum Mfg. Co.—Aluminum permanent mold, aluminum and zinc diecasting operations are explained in 16-page illustrated booklet entitled "Calvalcade of Casting Experience."

Mention Item NED-4487 when writing

Electrical Products

Wagner Electric Corp.—Mailed to industrial concerns on bi-monthly basis, 4-page illustrated publication entitled "Wagner Industrial Product News" deals with motors, transformers, industrial brakes and other electrical units.

Mention Item NED-4488 when writing

Gages

Sheffield Corp.—116-page illustrated catalog No. FG-4849 contains complete specifications, diagrams, tables and prices of fixed gages. Manual is first to present information and prices on gages conforming to new unified screw thread system.

Mention Item NED-4489 when writing

Pressed Powder Parts

New Jersey Zinc Co.—4-page illustrated bulletin entitled "Metal Powder Press" which is published quarterly contains information on nonferrous pressed powder parts.

Mention Item NED-4490 when writing

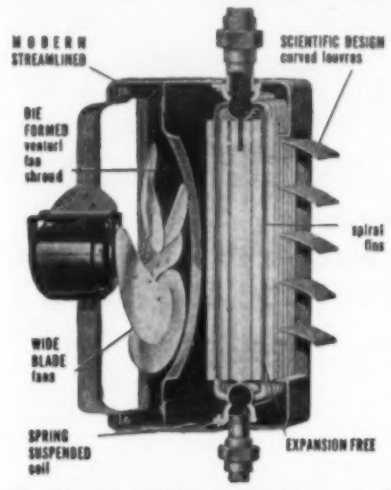
Steels

Jessop Steel Co.—16-page booklet describes leading brands of company's stainless and heat-resisting, tool and die, and cast-to-shape steels. Typical analysis and applications are included for each brand.

Mention Item NED-4491 when writing

Unit Heater . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for new folder "Instructions for Maintenance of Unit Heaters," **McCord Corporation,** Detroit, Mich., *Advt.*



Mention Item NED-4492 when writing

THAR'S REAL MONEY SAVED IN THEM THAR CARTONS!

Our friend, Mr. I. Staple, has been out digging . . . not for gold, but for facts about International Retractable Anvil Staple Machines . . . facts that will be of special interest to you, who are interested in cutting costs in your plant.

By closing his *filled* cartons *from the outside, tops and bottoms simultaneously,* this customer is saving some real money! It doesn't take a cost accountant to figure it out . . . just look at the picture. The cartons, which remain flat until ready for use (valuable storage space saved here), are being assembled by the young lady (upper left). Cartons are being filled by the gentleman (upper right); and down at the bottom of the picture you see the Staple Machine operator guiding the cartons through the Machine. Note the automatic centering device, which puts the cartons in their proper place under and above the Staple heads. This INTERNATIONAL RETRACTABLE ANVIL STAPLE MACHINE is pneumatically operated . . . a trip of the foot treadle causes Staples to be driven into both the top and the bottom of a carton *simultaneously.* (Valuable time saved here!)

Can't you picture how a similar, money-saving set-up can be worked into your shipping room? We would appreciate an opportunity to show you!

INTERNATIONAL STAPLE & MACHINE CO. HAVERTOWN PENNA. U.S.A. Retractable Anvil

INTERNATIONAL STAPLE & MACHINE CO.
HAVERTOWN 2, PENNA.
EST. 1938 DISTRIBUTORS IN PRINCIPAL CITIES

Mention Item NED-4493 when writing

AIR CONTROL VALVE

- ROTARY TYPE
- HAND LAPPED
- 1/4" PIPE PORTS
- 3- or 4-WAY
- LOW-PRICED

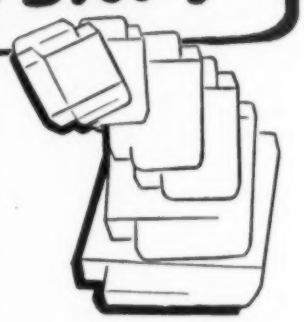
Thousands of N. P. hand operated Control Valves are controlling air pressure on buses, street cars, subway and elevated cars, where their dependability is essential to the safety of passengers.

Quantity production of this high-quality valve makes possible its unusually low price. For complete information, write for Bulletin No. DC-204

NATIONAL PNEUMATIC CO. NP
Industrial Division
RAHWAY, NEW JERSEY
Pneumatic Specialists Since 1904

▲ Mention Item NED-4494 when writing ▲

IMMEDIATE DELIVERY!



40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

•

Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Buzby Streets,
South Bend 23, Indiana

▲ Mention Item NED-4495 when writing ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO-GRAM NEW PACKING SCALE

Another Detecto-Gram Scale for weighing your ingredients accurately. New Model #8800 brings to your heavy duty weighing jobs the mechanical accuracy previously found only in small scales. Capacity 1/4 ounce to 60 lbs.

Write for Literature

DETECTO · SCALES · INC.
MAKERS OF FINE SCALES SINCE 1900
546 N. PARK AVENUE • BROOKLYN 5, N. Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

▲ Mention Item NED-4496 when writing ▲

New Literature – Continued

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

Magnetic Holding Equipment

Rockford Magnetic Products Co.—24-page illustrated booklet entitled "Magnetic Holding Methods" contains data on Power-Grip Viking chuck together with information on applications of Power-Grip magnetic holding equipment to milling, planing and grinding operations.

▲ Mention Item NED-4497 when writing ▲

Tools & Machinery Parts

George F. Bub & Son—Hand knobs, quarter-turn screws, jig feet, spherical washers, locating keys, C-washers and master shank holders are covered in 8-page illustrated catalog No. 49.

▲ Mention Item NED-4498 when writing ▲

Spray Drying

Swenson Evaporator Co.—Principles, advantages and applications of spray drying to practically all pumpable materials are discussed in 16-page illustrated bulletin No. D-105.

▲ Mention Item NED-4499 when writing ▲

Industrial Trailers & Trucks

Wenthe-Davidson Engineering Co.—6-page illustrated bulletin "Service Trucks and Stock Room on Wheels" shows construction features of various types of hand trucks rated to 3000 pounds, industrial dump trailer, push and pull type stock trucks, and rack trucks.

▲ Mention Item NED-4500 when writing ▲

Process for Electrical Connections

Electric Railway Improvement Co.—8-page illustrated catalog entitled "The Caldwell Process for Electrical Connections" presents information on method of welding copper to either steel or copper in which no outside source of heat is required. Catalog shows various types of welders together with equipment required for forming terminal connections, connections to horizontal and vertical surfaces, T-connections and ground connections.

▲ Mention Item NED-4501 when writing ▲

Small Motor

Redmond Co.—Type J 1/10-horsepower direct-current Micromotor for heating, ventilating and defrosting applications is featured in 4-page illustrated folder.

▲ Mention Item NED-4502 when writing ▲

Portable Belt Conveyors

Barber-Greene Co.—8-page illustrated bulletin No. 363 features versatility, adaptability and capacities of all-purpose model 363 portable belt conveyors which are made in lengths of 25, 30 and 35 feet with plain or cleated belts.

▲ Mention Item NED-4503 when writing ▲

Diesel Locomotive Crane

American Hoist & Derrick Co.—20-page illustrated catalog No. 600-L-6 covers mechanical features of model 830 thirty-ton capacity diesel locomotive crane used for magnet, grab bucket, grapple and hook work.

▲ Mention Item NED-4504 when writing ▲

Hose Accessories

Hose Accessories Co.—Complete line of Le-Hi hose couplings, hose clamps, air valves and manifolds is described in 4-page illustrated catalog No. 149. Other devices covered include throttle valves for compressed air service, air hammer hose couplings, special high pressure couplings and long shank couplings for low pressure steam and spray hose.

▲ Mention Item NED-4505 when writing ▲

All Metal Gaskets

Lead Alloy Products Co.—4-page illustrated bulletin No. 15-48 lists advantages of Clad-Seal gaskets which consist of thin, uniform cladding of lead bonded to each side of flexible central layer of copper. Lead gaskets without inner-layer construction are available for lower pressure static sealing conditions.

▲ Mention Item NED-4506 when writing ▲

Vibration Control

Korfund Co.—Construction and installation data for five types of cork vibration isolators are given in 4-page illustrated bulletin No. C-1. They have static load ranges from 250 to 30,000 pounds per square foot.

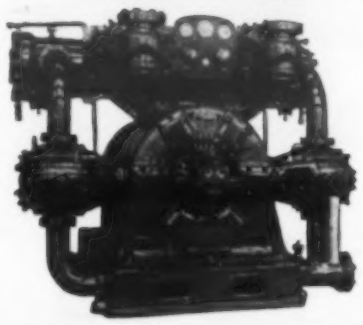
▲ Mention Item NED-4507 when writing ▲

Piping Materials

Crane Co.—32-page illustrated booklet No. 320 contains information on company's line of valves, fittings, fabricated piping and pipe coils to meet wide range of corrosive conditions.

▲ Mention Item NED-4508 when writing ▲

High Air Capacity . . .
Unmatched In Low Air Cost



JOY WN-114 COMPRESSOR

The WN-114 is a four-cylinder, two-stage compressor featuring JOY "Dual-Cushion" Valves for top efficiency. Single units (above) produce from 1092 to 3656 CFM, twin units up to 7312 CFM. The JOY line of stationary compressors, starting at 81 CFM, includes the most modern machines available for either centralized or decentralized air supply. *Write for Bulletins.*

Consult a Joy Engineer

W&D 12141

JOY MANUFACTURING CO.
General Offices: Henry W. Oliver Building
Pittsburgh 22, Pa.
IN CANADA: JOY MANUFACTURING CO. (CANADA) LIMITED
GALT, ONTARIO

▲ Mention Item NED-4509 when writing ▲

. . . to speed assembly and insure satisfactory operation of your product . . .

Production conscious Accurate engineers know the importance to you of having all your springs *exactly right.* They know that uniform springs which precisely meet your specifications simplify assembly and cut losses due to rejects Write for details, today.

ACCURATE SPRING MFG. CO.
3805 W. Lake Stree Chicago 24, Illinois

Springs — Accurate Springs — Wire Forms • Stampings

▲ Mention Item NED-4510 when writing ▲

NEW SHEAVE Varies Speed Without Stopping!

A-2710

★ Instant speed control at lower cost than ever before
★ Covers most speed change needs from 3 to 20 hp
★ Extremely simple—one sheave does all
★ Infinitely variable ratios — 2:1 speed range

Simple, most economical method of instant speed control ever devised. For details, see your A-C Authorized Dealer or Sales Office or write for bulletin 20B7223.

Vari-Pitch is an Allis-Chalmers trademark.

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

▲ Mention Item NED-4511 when writing ▲

High Speed Grinder 18,000 R.P.M.!

It's new!

It's the Haskins

VB-2!

Haskins VB-2 High Speed Grinder

THIS new Haskins high-speed grinder answers the need for a flexible shaft machine that has the speed and power to operate small grinding wheels and carbide rotary cutters efficiently. Designed for both bench and suspended use, the new VB-2 has a high-speed, cool-running flexible shaft and ball-bearing collet-type spindle—develops 18,000 r.p.m. free speed—makes cutting wheels and tools last longer. Find out today why it is becoming an indispensable tool for general light production work. Write for details. R. G. Haskins Co., 603 S. Washtenaw St., Chicago 12, Illinois.

haskins FLEXIBLE SHAFT EQUIPMENT

Mention Item NED-4512 when writing

BASA HAMMERS • FAVORITE WRENCHES • EMPIRE MALLETS

PALMETTO Packings

MORAN'S COUPLINGS • "TUSKO" WALRUS POLISHING LEATHER

ACID GOT THE BITE ON YOU?

-pack it away with PALMETTO'S SUPER-CUTNO

Built to take the punishment of sulphuric, nitric, mixed, heavy and other acids — and service on all acid-handling pumps and valves. Select long fibre pure blue asbestos . . . each strand impregnated with special acid-resisting self lubricant. Will not score, overheat, or nitrate. Plaited, twisted, ring.

Let Palmetto Blue Asbestos also take the bite out of acid problems as pressure-bonded Sheet, as Dry Blue Rope.

• Write for full particulars on the *entire* Palmetto line of packings for all industry.

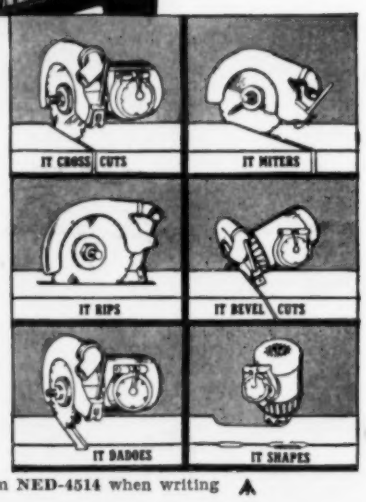
GREENE, TWEED & CO.
NORTH WALES, PENNSYLVANIA

Contact your fully-stocked Palmetto distributor on all packing problems . . . ask him about our special tools.

Mention Item NED-4513 when writing

THE NEW DEWALT

ALL-PURPOSE POWER SAW!



Does the work of many *machines!* Accurate, flexible, dependable — precision built for continuous service.

Write for catalog.

DEWALT, INC.
Lancaster, Penna.
126 Fountain Avenue

Mention Item NED-4514 when writing

New Literature — Continued

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

Industrial Rubber Products

Atlantic India Rubber Works, Inc.—150-page illustrated catalog 44 contains complete data on rubber and its compounds. Industrial rubber products described include vacuum lifters, grommets, bumpers, insulator bushings, special molded parts, desk feet, socket tips, strips, channels, mats, roll covering, plugs, handle grips, washers and innumerable other parts. Dimensions are given.

Mention Item NED-4515 when writing

Grinding Wheel Dressers

Desmond-Stephan Mfg. Co.—Illustrated 9 x 12-inch wall chart entitled "Desmond Dresser Guide to Better Grinding" describes various types of dressers for different applications on various types and sizes of grinding wheels and gives model and size numbers to serve particular wheel diameters and faces.

Mention Item NED-4516 when writing

Hole Punching Units

Wales-Strippit Corp.—16-page illustrated catalog CJ describes type CJ hole punching units designed to punch holes up to 1⅛ inches in diameter in metal up to ¼-inch thick mild steel. Also described is type NJ notching unit which provides maximum 5 x 5-inch 90-degree corner notch in sheets up to ¼-inch thick mild steel. Both these units can be used in combination for punching and notching in same operation.

Mention Item NED-4517 when writing

Pipeline Expansion Joints

Chicago Metal Hose Corp.—8-page illustrated bulletin EJ-49 gives engineering and product information on corrugated type expansion joints of copper and stainless steel for pipelines where pressure and temperature extremes exist. Sizes are available in diameters of 4 to 24 inches and for pressures up to 300 pounds per square inch.

Mention Item NED-4518 when writing

Shaft Seals & Lubricators

Gits Bros. Mfg. Co.—16-page illustrated "Price Guide Catalog" contains brief descriptions and application data as well as prices on complete line of lubricating devices which include oil hole covers, oil cups, bottler oilers, oil gages, grease cups, etc. Details are given also on rotary shaft seals.

Mention Item NED-4519 when writing

Rotary Concrete Drill Bit

Tilden Tool Co.—4-page illustrated catalog contains data on line of rotary concrete drill bits. Drills listed range from ¼ to 4 inches in diameter and from 5 to 18 inches in length. Extra shanks up to 36 inches long are available.

Mention Item NED-4520 when writing

Insecticide

Darworth, Inc., Cordacide Div.—4-page illustrated leaflet describes Cordacide insecticide which produces dense DDT-impregnated smoke blanket and leaves invisible coating on all room surfaces. Insecticide kills spiders, flies, gnats, mosquitoes, flying moths, fleas, wasps and hornets.

Mention Item NED-4521 when writing

Steel Belt Conveyor

Peterson Products Corp., Sermat Conveyor Div.—Typical installations of Flex-E-Unit steel belt conveyors are shown in 6-page illustrated folder. Available in lengths up to 175 feet and in widths from 12 to 36 inches, conveyors are produced in tilted and horizontal models.

Mention Item NED-4522 when writing

Flexible Metal Hose

Chicago Metal Hose Corp.—68-page illustrated catalog No. G-50 contains complete specifications for standard types of flexible metal hose in variety of metals. Sections on expansion joints for piping systems, stainless steel and brass bellows and various conduits and special assemblies of these components are included.

Mention Item NED-4523 when writing

Arc Welders & Accessories

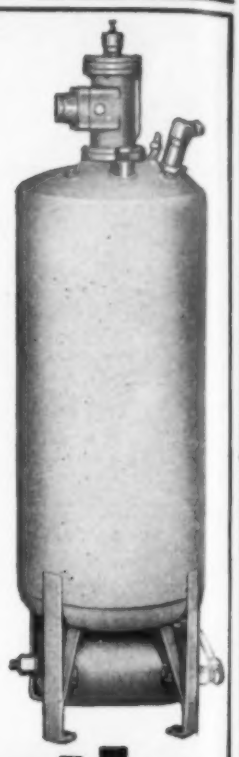
Hobart Brothers Co.—8-page illustrated catalog J-2708 contains descriptions, specifications and dimensions of electric motor-driven direct current welders in six sizes from 150 to 1200 amperes; gasoline engine driven welders in four sizes from 200 to 600 amperes; four alternating current transformer welders from 180 to 500 amperes and many other machines. Electrodes and accessories are covered.

Mention Item NED-4524 when writing

INSTANTLY COOLS

WATER
ALCOHOL — OIL

through rapid heat transfer

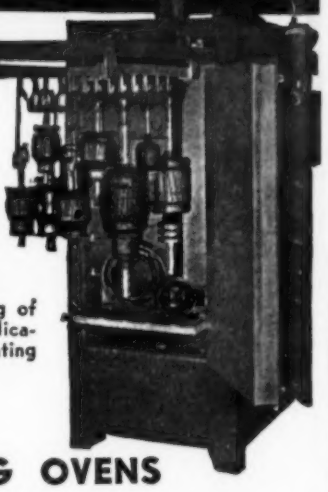


The exceptionally high capacity of the new Temprite industrial liquid cooler is the result of rapid heat transfer, made possible with the famous Temprite "flooded" cooling principle. A complete system may be installed to cool water, light oils, alcohol and certain chemicals, without the necessity of employing space-consuming storage tanks. For example, the compact 54"-high Temprite will deliver 1185 gallons per hour, reducing the temperature from 60° to 40°.

SINCE 1929 Temprite PRODUCTS CORP. 21 PIQUETTE, DETROIT 2

Mention Item NED-4525 when writing

50% FASTER BAKING ON REPAIR JOBS



Ideal for Synthetic Films, Dulux, Lacquer, Enamel, etc.

You can often cut baking time up to 50% with Despatch R S Batch Type Ovens. They are extremely adaptable for finish baking of small batches such as armatures; for baking paints on grills, assemblies, etc.; for drying, dehydrating or core baking; for preheating of plastics, and many other applications where fast, thorough heating is required.

DESPATCH
R S Batch Type
FINISH BAKING OVENS

are shipped fully erected and do not require an engineer to set them up. Gas or oil fired, very economical, with working range from 200° to 500° F. Automatic heat control for desired uniform temperature. Sizes from 11 to 90 cu. ft. capacity, all easy to load and unload. Write for literature, tell us what type of work you have.

Write for Bulletin on R S Ovens.

DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

325 DESPATCH BLDG. MINNEAPOLIS, MINN.

Mention Item NED-4526 when writing

CASE REPORT No. 54 from a series of actual cases recording the successful application of "BEAR" DY-NAMIC BALANCING to Industry

DY-NAMIC BALANCING
"Earns its Oats" at Quaker Oats!

"Bear" Dy-Namic Balancing Machines are "naturals" for maintenance applications as well as for manufacturing! Adjustable columns facilitate handling of various length parts, adjustable rollers make it easier to change shaft diameter requirements. The universality of "Bear" Machines permits a wide variety of applications with minimum time for set-up changes.

FREE! Dy-Namic Balancing Manual

Hundreds of applications..case studies ..illustrations..Dy-Namic Balancing tables. GET YOURS TODAY! Write "Bear" Mfg. Co., Dept. N-5, Rock Island, Illinois

THE QUAKER OATS CO.

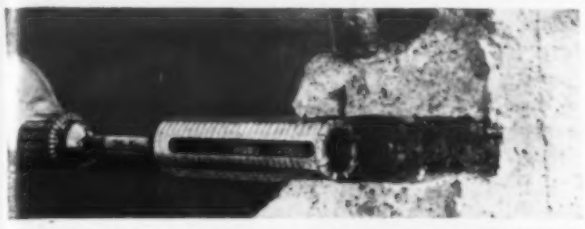
Maintenance Shop, Cedar Rapids, Ia., reports: We balance hammer mill rotors, fan wheels, pulleys, armatures, etc., on our "Bear" Model 375-R. Dy-Namic Balancing enables us to prevent excessive vibration in valuable machinery and premature wear of bearings and equipment.

BEAR STATIC AND DY-NAMIC BALANCING MACHINES

Trade Mark Registered U. S. Patent Office

Mention Item NED-4527 when writing

DRILL CONCRETE
2 TO 6 INCHES PER MINUTE



WITH THE REVOLUTIONARY TILDEN ROTARY CONCRETE CORE DRILL BIT,

driven by ordinary electric drill

Up to 70% more efficient than pointed or solid drills. Leaves straighter, cleaner holes. Tilden Rotary Concrete Drill Bits are available in sizes from ¼" to 4" diameter. Quotations on sizes from 4" to 8" will be made upon request.

Ordinary pointed or solid drill (left) must drill *full* area of hole. Point of drill acts as pivot and retards cutting. Only one double cutter gives slow action. Slow-moving ⅛" center travels at only 13% of most efficient cutting speed.

TILDEN CORE TYPE DRILL (right) drills much smaller area of hole. Has no point to retard cutting. All drills have from 3 to 24 cutters, depending on size of drill, which travel at best cutting speed, give fast, efficient action.

Write for catalog with complete details on this revolutionary concrete drill bit. DISTRIBUTORS: inquiries welcomed.

TILDEN TOOL MFG. CO.

1995 N. Fair Oaks, Pasadena 3, Calif.

▲ Mention Item NED-4528 when writing ▲

FOR A SHARPER IMAGE OF

TOP PROFITS IN TELEVISION PRODUCTION and SALES

. . . set-builders use AMERICAN PHILLIPS SCREWS

SEE NEW PRODUCTION PROFITS: Assembly of costly television sets puts a prohibition on spoilage. That's why American Phillips Screws are used, to help keep sets rolling out to an eager market, and to keep rejections down.

SEE NEW SALES-STIMULATION: Smoothly finished, unmarred cabinet work is the basis of television-set sales. And that's the way sets come from an assembly department using *American Phillips Screws.*

AMERICAN SCREW COMPANY, Providence 1, R. I.

AMERICAN PHILLIPS *Screws*

▲ Mention Item NED-4529 when writing ▲

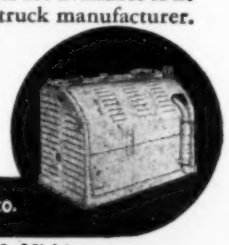
READY-POWER IS BEST FOR ELECTRIC TRUCKS

Ready-Power-Equipped Mercury Fork Truck

BEST because Ready-Power delivers "constant-peak" electric power generated right on the truck chassis.

BEST because Ready-Power Units are available to fit the specifications of any electric truck manufacturer.

BEST because *only* Ready-Power can give you the constant availability of gasoline PLUS the flexibility and low maintenance of electric drive.



THE READY-POWER CO.

3832 Grand River Ave., Detroit 8, Michigan

▲ Mention Item NED-4530 when writing ▲

New Literature – Continued

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

High Speed Photography

Illustrated 129-page booklet describes various high speed cameras and motion picture and high speed still photography. Specific topics discussed include electrical flash photograph, high speed stroboscope, lamps for high speed photograph, methods of analyzing and uses of high speed photograph in automotive and other industries and research. Price is $1.50. Available directly from Society of Motion Picture Engineers, 342 Madison Ave., New York 17, N. Y.

▲ Mention Item NED-4531 when writing ▲

Elevators & Cranes

Barrett-Cravens Co.—Details of line of elevators and portable cranes are given in bulletin 10482. Elevators shown include stationary and portable, hand and power actuated types with capacities up to 5000 pounds. Also described are portable cranes in wide range of capacities, and hand and electrically operated hoists in 500 to 2000-pound capacities.

▲ Mention Item NED-4532 when writing ▲

Burs & Accessories

Pratt & Whitney Div., Niles-Bement-Pond Co.—44-page illustrated catalog "Keller Burs and Accessories" shows actual shapes and lists available sizes of Master-Ground solid high speed steel and carbide burs. Details are given on sanding and polishing drums, abrasive sleeves and disks, mounted stones, arbors and polishing wheels.

▲ Mention Item NED-4533 when writing ▲

Hydraulic Shop Presses

Rogers Hydraulic Inc.—18-page illustrated catalog No. 313 is descriptive of complete line of hydraulic shop presses ranging in capacity from 60 to 400 tons. Included are details of hand and power pumps for operating presses and data on press accessories for various types of shop operations.

▲ Mention Item NED-4534 when writing ▲

Electronic Measuring Equipment

General Electric Co., Specialty Div.—Illustrated catalog gives complete specifications and application charts on electronic measuring equipment, quartz and germanium crystals. Among equipment described are regulated power supplies, oscilloscopes, radio frequency capacitometer, square wave generator, scalers and industrial tube analyzer.

▲ Mention Item NED-4535 when writing ▲

Centralized Lubrication

Farval Corp.—Economies reported by users of Farval equipment are summarized in 8-page illustrated bulletin "Studies in Centralized Lubrication, 1949". Case studies are cited to show advantages of savings in labor and lubricant, elimination of downtime and increase of production obtained on paper machines, presses, shaker screens, traveling crane, rock crusher and flaking mill which were lubricated with centralized system.

▲ Mention Item NED-4536 when writing ▲

FLOORS TAKE BEATINGS

CAN YOUR RESURFACING MATERIALS MEET THESE TESTS?

HAMMER TEST
Hit any mastic patch in the entire field with a hammer and then do the same thing to Texas Jack. What a difference!

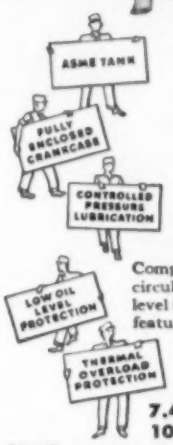
THE DRAG TEST
Drag a very heavy object directly over any other mastic and then do the same with Texas Jack. What a difference!

THE RUT TEST
Pull a heavy load—a load as heavy as your buildings can stand, over any other mastic in the entire field—and then do the same thing with Texas Jack. What a difference!

TEXAS JACK
RESURFACER will perform far above them all every time. Investigate! We will gladly send to you free literature on request.

FLASH-STONE CO., Inc.
3723 PULASKI AVENUE, PHILA. 40, PA.

▲ Mention Item NED-4537 when writing ▲



A PARADE OF ADVANTAGES

Westinghouse Air Brake Co. "Y" COMPRESSORS

All modern features . . . PLUS these vital Points of Protection

Same system as used in modern automotive engines. Positive over-running oil pump "meters" oil to working parts. Exclusive with the "Y".

Compressor will not load (pump air) until oil circulation is established . . . and unless oil level is at proper height. Another "Y" exclusive feature.

Automatic switch cuts power if motor overheats—standard equipment on the "Y".

7.4 to 41.5 CFM displacements . . . 1½ to 10 HP. Ask for Bulletin IDC 9302-3.

Westinghouse Air Brake Co.

Industrial Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES

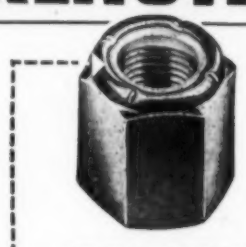
CONSULT YOUR CLASSIFIED DIRECTORY

▲ Mention Item NED-4538 when writing ▲

HIGH STRENGTH

Self-locking

U-BOLT NUT



The ESNA U-Bolt Nut, with the famous Red Elastic Collar, holds permanently against all shock or vibration. It was designed to eliminate the causes of most automobile leaf spring breakages—*loose* or *unequally loaded fasteners*—that account for more than 4,700,000 spring repair jobs annually in dealer, independent and fleet owner shops. The ESNA U-Bolt Nut has an extra long, extra strong body that will withstand a bolt loading up to 140,000 psi. Sizes range from ⅜" to 1". Write for complete information and your copy of the new ESNA U-Bolt Catalog. Address: Elastic Stop Corporation of America, Dept. UB, Union, New Jersey.

ESNA ELASTIC STOP NUTS

Products of: ELASTIC STOP NUT CORPORATION OF AMERICA

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CLIP THIS COUPON

. . . and get yourself this Folder containing the inside story on . . .

du MONT's *Minute Man*® KEYWAY BROACH KITS . . .

what they do for you, what they cost, how much time and money they save you cutting keyways in gears, milling cutters, pulley hubs, collars, couplings, etc., etc.

This Kit may be worth a lot of money in your shop. It only costs a postage stamp to find out!

THE du MONT CORPORATION
Greenfield, Massachusetts

Please mail me Descriptive Folder and Price List. D.

Company.....

Address.....

Name and Position.....

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▲ Mention Item NED-4541 when writing ▲

DILLON

MECHANICAL PRESSURE GAUGE

measures up to 5,000 lbs. pressure, . . . yet fits in the palm of your hand!

Designed to get in spots where other gauges can't—spots heretofore inaccessible, and measure working loads accurately—quickly—easily. Ruggedly built, lightweight and compact.

Operation is simple. Mounted on a "U" shaped pressure bar is a jeweled dial indicator. The instant a load is applied, indicator measures exact amount translated into pounds.

Versatile, with almost unlimited applications! Use the Dillon Gauge for testing, operating and spring pressures, moving shafts and filaments, compressive loads and many others. Use coupon below for detailed information bulletin.

THE DILLON PRESSURE GAUGE YOU NEED IS IN THIS LIST

Model	Size	Gauge Wt.	Divisions	Dial	Price
0–100 lbs.	3-5/8x2-7/32x1-3/4	1-1/4 lbs.	2 lb.	1-3/8"	$99.00
0–250 lbs.	4-5/16x2-7/16x2-5/16	2-lbs. net	5 lb.	1-7/8"	109.00
0–500 lbs.	4-5/16x2-7/16x2-5/16	2-lbs. net	5 lb.	1-7/8"	119.00
0–1000 lbs.	4-5/16x2-7/16x2-5/16	2-lbs. net	10 lb.	1-7/8"	129.00
0–2500 lbs.	4-5/8x2-3/8x2-3/4	2-1/2 lbs.	25 lb.	2-3/8"	139.00
0–5000 lbs.	4-5/8x2-3/8x2-3/4	2-1/2 lbs.	50 lb.	2-3/8"	149.00

All are handsomely finished and packed in strong wood case.

W. C. DILLON & CO., INC.
PRECISION INSTRUMENTS FOR PRECISION TESTING
Complete catalog sent on request

IT'S FOR YOU . . . FREE TENSILE STRENGTH COMPUTER that tells in seconds the tension at which round or rectangular specimens will break. Complete information on Pressure Gauge sent along, too.

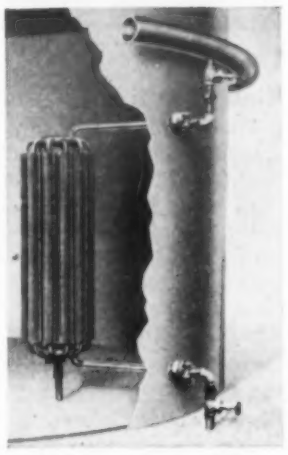
W. C. Dillon & Co., Inc.
5410-NE, W. Harrison St., Chicago 44, Illinois

Please send me at once, your FREE Tensile Strength Computer and Complete Information on the Dillon Pressure Gauge.

Company _____
Name _____
Address _____
City _____ Zone _____ State _____

▲ Mention Item NED-4542 when writing ▲

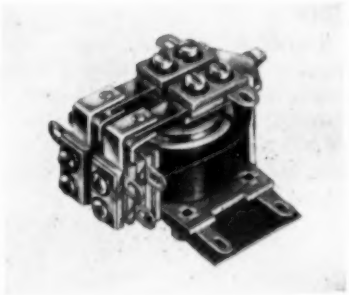
TANK HEATER



Fabricated from mild steel, stainless steel, Monel, Everdur or other metals to meet individual requirements, Thermo-Flo finned tube tank heaters can be used in place of bare pipe coils for heat transfer. These compact units will pass through standard 20-inch manway with ample clearance and because of vertical mounting, will practically eliminate fouling resulting from deposition sediment. Heat transfer is efficient because of thermal siphon or flow within tank which avoids stratification. Each lineal foot of Fintube in heater has heat transfer surface which is equivalent of 6 lineal feet of plain bare pipe. Made by **Brown Fintube Co.**, 160 Filbert St., Elyria, O.

▲ Mention Item NED-4543 when writing ▲

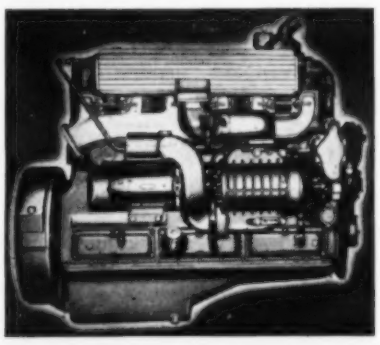
MIDGET RELAY



Suitable for use on equipment where compact size and cool operation are required, this midget relay which measures 1⅛ x 1⅜ x 1⅞ inches can be adapted for use in enclosed units and shielded control panels. It employs standard silver contacts rated at 5 amperes, has power consumption of 1 to 2 watts and can be obtained in any combination of switches up to double-pole, double-throw. Mounting is of single-center stud type, and relay can be supplied for use on potentials up to 110-volt alternating or direct current. Made by **Comar Electric Co.**, 3148 N. Washtenaw Ave., Chicago 18, Ill.

▲ Mention Item NED-4544 when writing ▲

DIESEL ENGINE



Developing 225 horsepower at 1800 revolutions per minute, model HRS-600 supercharged diesel engine has 5⅛-inch bore, 6-inch stroke and piston displacement of 743 cubic inches. It employs four-stroke cycle principle of operation and special fuel distribution and injection system. In addition to basic industrial engine shown, various adaptations can be obtained for automotive, marine and similar applications. Made by **Cummins Engine Co.**, Columbus, Ind.

▲ Mention Item NED-4545 when writing ▲

INGENIOUS ELECTRIC TRUCK HANDLES ANY PRODUCT

WORKS ALL DAY FOR 11¢*

CUTS HANDLING COSTS *IN HALF!*

A famous miracle electric truck called Automatic Transporter, moves and lifts your products *at savings of at least 50% over antiquated manual handling* . . . and costs you as little as *11c-a-day battery charging cost.

That's because operator simply pushes a button, and Transporter moves tons of your product like play. One man accomplishes as much as three, faster, easier. You move *more at less cost*, can save thousands of dollars without money-wasting, fatiguing push, pull, and strain. Industry tested and proved, thousands and thousands of Transporters are in daily operation.

Find out how Transporter pays for itself in no time at all, with maintenance negligible. FREE CATALOG tells the story. Write for it.

AUTOMATIC TRANSPORTATION COMPANY
DIV. OF THE YALE & TOWNE MFG. CO.
61 W. 87th St., Dept. H-9, Chicago 20, Ill.

▲ Mention Item NED-4546 when writing ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO WINDOW PLATFORM

For Window-Washers, Painters and Maintenance Men

- Held firmly in position by adjustable steel tube on inside of window.
- Each bracket tested for 800 pounds.
- Quickly adjusted in one minute.
- Collapses compactly . . . Weighs only 32 pounds.

IPCO

Approved by the Pa. Dept. of Labor and Industry. Provides security and saves time for personnel working on outside of windows . . . Equalization of stresses and anchorage combine in providing absolute stability.

Write for Bulletin No. L-69

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

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SPRING PRESSES

POWER AND FOOT OPERATED

For riveting, staking, stamping and similar operations on small light parts. Constructed to compensate for variation in thickness of the work and to deliver a UNIFORM BLOW AT EVERY STROKE.

M-110 (illustrated) motor driven to eliminate fatigue factor of foot operated press—similar press M-130, equipped to operate by compressed air.

SEND FOR BULLETIN

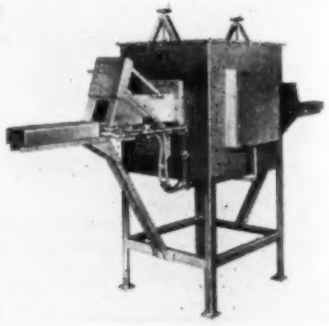
EST. TF 1834

THE TAYLOR & FENN CO. HARTFORD 1, CONN.

▲ Mention Item NED-4548 when writing ▲

NEW "SNX" PERECO FURNACE . . . FOR SINTERING, BRAZING, ANNEALING by "Straight-Line", 3-Zone System!

Heat range of this compact unit is 1400° to 2750° F. This Globar element furnace is manual pusher type, designed for batch treatment on a "straight-line", 3-zone system. Work moves from purge (preheat chamber), through high temperature area, then water cooled area. Ideally suited for sintering powdered metals, brazing, bright annealing and metal research uses. Gas tight construction throughout. Has counter-balanced doors equipped with automatically operated flame curtains which prevent contamination of furnace atmosphere when doors are open. Connections provided for controlled atmospheres. Unit has high temperature zone area of 4" w. by 4" h. by 12" l. Max. power input 15 K.W. Other muffle sizes available. Write for full details.



PERECO makes standard and special electric furnaces for any temperature from 450° to 2700° F.

A few choice PERENY dealerships are still available. Inquire.

PERENY EQUIPMENT COLUMBUS OHIO
PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, O.

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SAVE up to 85% on NEW WAR SURPLUS

New Double Acting HYDRAULIC CYLINDERS

51 Types, shapes. 1001 Labor Saving Adaptations for Pushing, Pulling, Lifting. Finest Precision Work, Materials. All Accessories, Fittings, Valves, Pumps. 15% OF GOV'T COST - WRITE FOR CATALOGUE

PNEUMATIC DRILLS, TOOLS, & RIVET GUNS

AIR DRILLS OR MOTOR SPECIAL with ¼" JCB Chuck ARO PISTOL $17.50 with ¼ Jcb Chuck

Also Nut Runners Screwdrivers Squeezers Angle Drills etc. Popular Makes

RIVET GUNS Pistol & Gooseneck Type E3, E2, 3X, 2X, OY $55 Value #101 Pistol $8.95

WRITE IN FOR FREE TOOL CATALOGUE

NEW DUST RESPIRATORS 200,000 in 5 different types with adjustable hd. bnds.

FOR PNEUMOCONIOSIS— producing stone, road dusts, mists, & chromic acid dust produced in crushing, mining, road building, abrading, farming, drought, painting, spraying, etc. Ideal for Farm, Mill, Factory, Garage, Foundry.

AMERICAN OPTICAL CO. RESPIRATOR Style R-9100 small & compact especially suited to laboratory & hospital work. 59¢ ea.

M-1 Bi Valve Type 29¢ each in lots of 50, 25c ea. 100 or more 19c ea.

COMFO RESPIRATOR dual-disc. Style BM-2101, with 10 extra filters a $3.50 value $1.59 each

Wilson Co. Dual Disc. Type J-750 with 10 Extra Filters. In appearance like BM-2101 $1.29 each

We stock Aluminum, Magnesium, Brass, Copper, Steel in sheets. Bar Tubing and Angles, Plexiglass, Lucite, Phenolic, A & N Fittings, Rivets, Bolts, Nuts, Aircraft Supplies. Just arrived - 5000 lbs. of ¼" and 5/16" Plexiglass in full sheets 36" x 48" - also 15,000 lbs full sheets of Nascolite 36" x 48" - all masked and new. Send for New 92-Page 1949 Catalog

PALLEY SUPPLY CO. DIVISION NED-6 6321 SAN FERNANDO RD. GLENDALE 1, CALIFORNIA

Mention Item NED-4550 when writing

Protect COMPRESSED AIR TOOLS

With Armstrong Air Traps!

MOISTURE in air lines washes out the lubricant in compressed air tools, causes excessive wear and corrosion. For maximum protection against moisture damage install one of three types of Armstrong Air Traps on aftercoolers, separators, receivers and at low points on air lines.

1. The Armstrong No. 71 Snap Action Air Trap is the ideal answer on many systems. The valve opens and closes with a snap—no dribbling, no hunting, not held open by small dirt particles. Can't leak costly air and no priming is necessary. Cast body for pressures to 250 psi, forged steel to 1000 psi.

2. The No. 21 Ball Float Trap is the low cost, high quality trap for service where very little dirt or scale is encountered. For pressures to 125 psi.

3. The Inverted Bucket Type Trap (in several sizes) is the only air trap manufactured suitable for severe dirt and oil conditions; is frequently recommended for inter-cooler drainage on two stage compressors where considerable oil is encountered.

All Armstrong Air Traps are unconditionally guaranteed to give satisfaction. WRITE FOR BULLETIN 1433. ARMSTRONG MACHINE WORKS, 819 Maple St., Three Rivers, Mich.

No. 71 Snap Action Trap $31.00

No. 21 Ball Float Trap $11.00

No. 213 Inverted Bucket Trap $20.75

ARMSTRONG Air TRAPS

Mention Item NED-4551 when writing

KEYSTONE JUNIOR CONVEYORS

100% prefitted. Bolted joints. No track welding, cutting or fitting required for installation. Easily installed. Low first cost. Overhead or floor supported. Load capacity 75# per trolley. Rivetless Drop Forged chain 2" pitch. Ball-bearing trolleys.

KEYSTONE JUNIOR CONVEYORS are identical to their big brothers the 348 and 458 conveyors, which are the accepted standard throughout the world. The Keystone Junior picks up where the 348 leaves off. Handling loads of 75# per trolley or live loads of up to 10,000# it is a Little Giant. Caterpillar or Corner Drives available. Vertical turns as small as 2' Radius. Horizontal turns as small as 9" Radius. Rotating hooks available for use in spray booths, ovens, etc. Conveyor speeds from 3 F.P.M. to 80 F.P.M. available.

Write for Bulletin No. 449

KEYSTONE CONVEYOR CO.

21750 West Eight Mile Rd. Detroit 19, Michigan

Mention Item NED-4552 when writing

New Literature – Continued

Use Inquiry Slip enclosed between pages 8-9 or 72-73 to obtain any of the new literature reviewed on these pages.

Lock Nuts

Stover Lock Nut & Machinery Corp.—4-page illustrated folder is descriptive of Stover one-piece lock nut requiring no washer or auxiliary parts. Unaffected by extreme temperature variations or by presence of lubricants or other destructive elements, lock nuts are available also in brass, silicon bronze, aluminum and high carbon and alloy steel.

Mention Item NED-4553 when writing

Hydraulic Control Valves

Gerotor May Corp.—52-page illustrated catalog section 201 describes over 90 models of four-way hydraulic valves. Description of each includes working drawings, specifications, cutaway views and operating diagrams. Valves are suitable for pressures up to 1500 pounds per square inch; can be hand, foot, cam, solenoid, oil pressure or air pressure operated; and feature standard, spring return, spring centered and ball detent actions.

Mention Item NED-4554 when writing

Pipe Tools & Machines

Toledo Pipe Threading Machine Co.—52-page illustrated catalog "This Is Toledo" describes hand-operated pipe tools in capacities up to 12-inch pipe; power pipe machines in three models for ½ to 4-inch pipe; power drives for geared pipe threaders and for opening sluice gate valves, turning boring bars, operating winches and turning sheet metal rolls; and supplies and accessory equipment.

Mention Item NED-4555 when writing

Timing Motors & Devices

Haydon Mfg. Co.—Details of synchronous timing motors, chart drives, timing devices and clock movements are presented in 20-page illustrated catalog No. 20. Included are pictures and profile drawings of all units; shaft drawings and listings of speeds, voltages, frequencies, shaft sizes and special variations of ten motor series. In addition to synchronous timing devices, direct current timers and motors are covered.

Mention Item NED-4556 when writing

Magnetic Motor Controls

Trumbull Electric Mfg. Co.—22-page illustrated bulletin TEB-8 announces new line of magnetic motor controls which provide full protection against damage from overload and under-voltage to alternating current motors rated up to 50 horsepower. Described are types of disconnects, reversing and nonreversing starters, reversing and nonreversing contactors and combination magnetic starters.

Mention Item NED-4557 when writing

Conditioned Air Recovery

W. B. Connor Engineering Corp.—"A Dream of Green Air" is title of 16-page illustrated bulletin No. 118 which utilizes narrative copy to explain advantages of using activated carbon purification to permit recovery and recirculation of conditioned air in all types of buildings. Air recovery eliminates odors, minimizes required capacity of equipment for heating or cooling and assures efficient operation of system.

Mention Item NED-4558 when writing

Hydraulic Standards

Miller Motor Co.—16-page illustrated booklet lists J. I. C. hydraulic standards for industrial equipment and shows how Miller hydraulic cylinders meet standards specifically relating to cylinders and component parts. Data are given on recommended use of various types of piston and piston rod seals to fit different application requirements.

Mention Item NED-4559 when writing

Pipe Locators

Fisher Research Laboratory, Inc.—Two illustrated booklets and supplementary price list present information on M-Scope pipe and cable finders and leak detectors. Eliminating exploratory excavations, M-Scope solves problem of lost, unknown, illegal or unauthorized connections and other problems in operating and maintaining underground pipe or cable system.

Mention Item NED-4560 when writing

Air Motors

Bellows Co.—16-page illustrated bulletin BM20-R shows design and operating principles of Bellows nonrotating air motors which consist of double-acting reciprocating power cylinder, built-in valve, valve operating controls and independent piston stroke speed controls. Use of units for feeding work, holding and clamping, machine actuating and other applications are described.

Mention Item NED-4561 when writing

More WELDING going on here....

More welding and less time spent in flopping, propping up and crawling around weldments is the end result of the C-F Positioners in this welding department.

Mounted on C-F Welding Positioners, weldments can be quickly brought into position for a downhand pass — better, more uniform welds with resulting economies and production increases follow. Welders spend more time welding when they work with C-F Positioners because one "set-up" on the table allows them to maneuver the job without assistance, whether hand or power operated Positioners are used.

Power operated, variable speed C-F Positioners, with table rotation speeds in any range from 0 RPM and up, coupled with table tilt to 135° from the horizontal make them the logical choice for any production welding operation. Like all C-F Positioners, they have drilled tables for easy set-ups or tables can be quickly removed for installation of special fixtures or jigs. Write for Bulletin WP 24. CULLEN-FRIESTEDT CO., 1304 S. Kilbourn Ave., Chicago 23, Ill.

CULLEN-FRIESTEDT CO. CHICAGO 23, ILL. C-F positioned welds mean better, more economical welds

Mention Item NED-4562 when writing

Big Boy— strong on back, but weak on method

Little Man with the right answer— for saving time and making money

For Installation or Repair A Portable

Tal Bender

with new bend indicator

Anyone can make perfect bends with a Tal machine, on-the-job or in-the-shop. This fast working, easy-to-operate bender for wrought iron or steel pipe does in minutes work that otherwise takes many hours. No wonder thousands are in service everywhere. Write today for factual bulletin.

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

Mention Item NED-4563 when writing

NEW! AVAILABLE NOW

1/2 CU. YD. CAPACITY!

Hystaway Hoe Front

For use with Hystaways mounted on ALL "Caterpillar" D8 and current series of D7 track-type tractors.

A HIGH SPEED, rugged NEW EARTH MOVING TOOL for *ditch and trench digging and basement excavating.* DOES ANY JOB that conventional ½-cubic yard bucket (cutting width 33 inches) CAN DO.

The Hystaway Hoe Front will dig to a full 15 ft. depth. It has *more reach* than a conventional back hoe—an extremely FAST SWING—an actual *excess of power* because of the "Caterpillar" diesel tractor engine.

Current delivery. See your "Caterpillar" distributor.

HYSTER COMPANY

2906 N. E. Clackamas Portland 8, Oregon

1806 North Adams Street Peoria 1, Illinois

Mention Item NED-4564 when writing

IN ANY OF THESE CHEMICALS

acids (mineral and organic), alkalis, chlorinated solvents containing hydrogen . . .

oils, greases, fats, gasoline, aromatics, nitroparaffins, and other hydrocarbon compounds . . .

alcohols, ethers, esters, heavier ketones, carbon tetrachloride . . .

hydraulic fluids, paint dryers, pickling baths, photographic solutions, plating solutions, printing inks, refrigerants . . .

Jumbo size, curved fingers-knit wrist, band top, gauntlet, and ventilated back types available.

SURESEAL PK COATED GLOVES

MOST HAND PROTECTION • LOWEST COST LONGEST WEAR

For details on this **NEW DEVELOPMENT** in coated fabric work gloves write to: Dept. N

THE SURETY RUBBER CO. CARROLLTON, OHIO

▲ Mention Item NED-4565 when writing ▲

Pressures up to 5000 p.s.i.

● Positive and fast acting—with U-shaped packers that are expanded by pressure—these valves seal tightly preventing leakage. All operating parts are in pressure balance eliminating any tendency to creep or crawl. There is no lapping—no grinding—no metal-to-metal seating. The machined steel housings; stainless steel plungers; and renewable metal rings to prevent wear on the U-packers, assure users a maximum of long, efficient, trouble-free service. 2, 3 and 4 way actions—½" to 4" sizes. Hand and pilot cylinder operated.

Send for a catalog today—and get full details about the complete line.

Manufactured by **C. B. HUNT & SON, INC.** *Salem, Ohio*

ENGINEERING AND SALES REPRESENTATIVES IN THE PRINCIPAL CITIES

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GEOPHONE*

Does Away With Costly, Old-Fashioned Methods of Locating Leaks!

• MONEY-SAVING
• ACCURATE
• FAST

★ The Globe Geophone scientifically and accurately locates water and steam leaks. There's no costly, time - consuming excavation when a Geophone is used. A compact and sensitive instrument operating on the principles of the seismograph and stethoscope, the Geophone picks up and detects, even when 50 to 75 ft. away, the vibrations of the pipe break, and locates it accurately within a few minutes.

The Geophone is indispensable for Water Departments and Industrial Plants. Used also with spectacular results in mining, oil and termite fields.

Complete Geophone outfit consists of connecting tubes, two Geophone discs, headpiece and heavy leather - covered carrying case with shoulder strap. **$85**

Pipe Phones $3.70 (Aquaphone)

Globe Phone Mfg. Corp. READING, MASS. Dept. N

Manufacturers of Geophones Since 1918

*Registered in United States Patent Office

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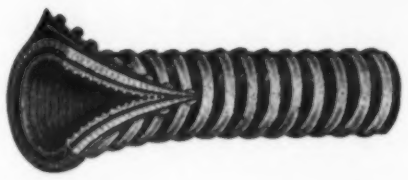

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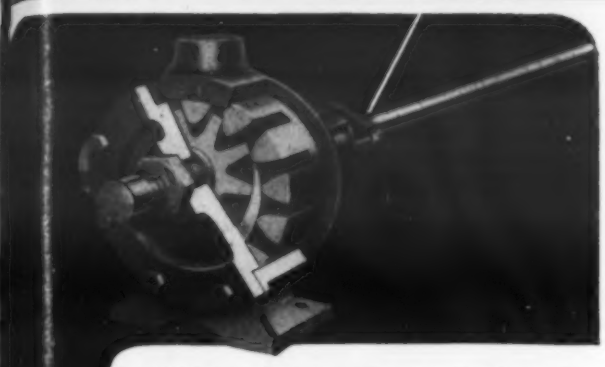

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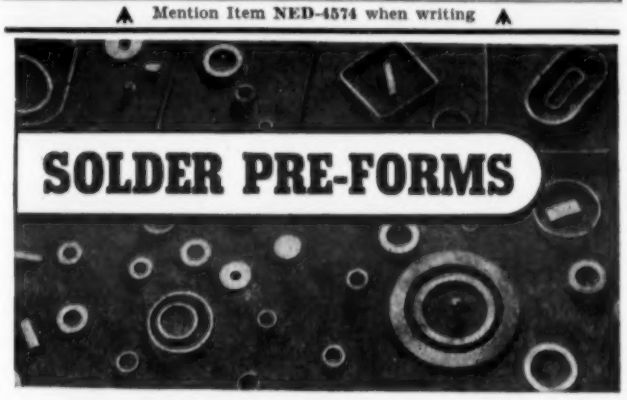

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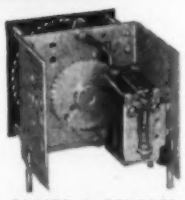

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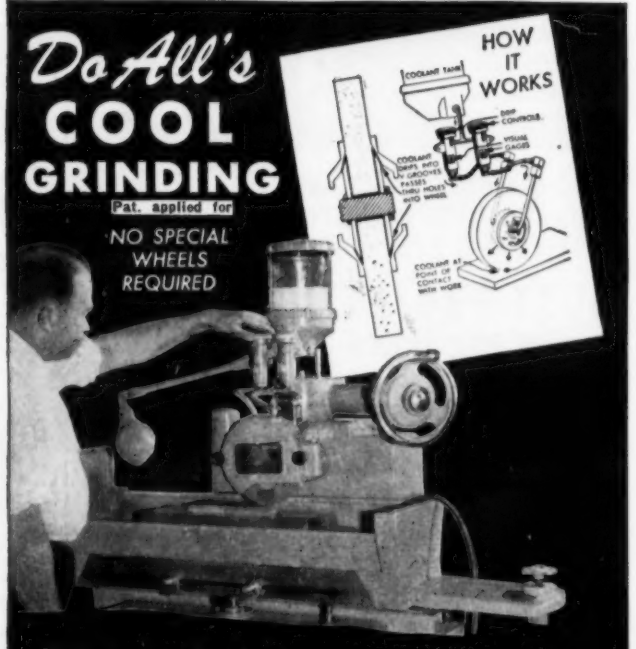

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DIXON SWIVEL CONNECTION

U. S. Pat. No. 2338716

Turns Freely With the Hose . . .
Prevents Twisting and Kinking

Plain design, sturdy construction, in cadmium plated steel. For end or intermediate connections. Requires no lubrication or adjustment. Leakproof under all normal working pressures on air, water and hydraulic hose lines. Sizes ½" and ¾" I. P. T.

Sold by Manufacturers and Jobbers of Mechanical Rubber Goods.

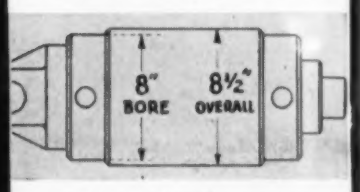
DIXON VALVE & COUPLING CO.
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.
BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

▲ Mention Item NED-4580 when writing ▲

Save 1/3 in Space

NEW, COMPACT O-M CYLINDERS

Simplified design and elimination of tie-rods saves you up to 1/3 in space required for installation of these new hydraulic, water

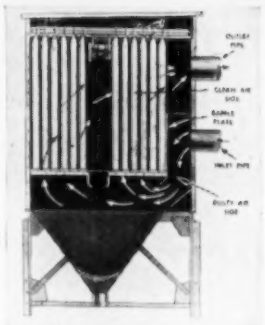


or air cylinders.
No bolts or screws . . .circumferential keys allow repacking in a matter of minutes. All machined steel with bronze bearing surfaces. Ports adjustable to any angle. Simplified cushion, no ball check required. Mountings interchangeable without dissassembling cylinder. 1,500 cycles per minute continuous duty guaranteed.
Write for details today!

ORTMAN-MILLER
MACHINE CO., INC.
1222-4 150th Street, Hammond, Indiana

▲ Mention Item NED-4581 when writing ▲

Simple DUSTUBE Design Means Efficient Economical Dust Control



Unusually low maintenance and operating costs result from the simple yet highly efficient Dustube design. A system of cloth tubes filter the air to remove nearly 100% of the dust by weight, yet costs are confined to power for operating the fan and shaker and the occasional replacement of an inexpensive cloth tube. There are no contacts between the cloth tube and metal, therefore tubes last longer. When necessary, tubes can be replaced by one man without tools. You can always be sure that a Dustube is operating at peak efficiency, because the tubes are visible for immediate examination. There is nothing to disassemble for inspection . . . tubes can be quickly checked from the clean air side.

Users report that Dustube keeps their plants so clean with so little attention they practically forget it's there. Investigate the Dustube today. Write for Catalog 72-A.

American dustube
WHEELABRATOR & EQUIPMENT CORP. DUST COLLECTORS
508 S. BYRKIT ST., MISHAWAKA 8, IND.

▲ Mention Item NED-4582 when writing ▲

NEW Rodgers

60-80 TON SHOP PRESSES

For 101 Light Press Jobs

Shown is the new Rodgers 60 Ton Hydraulic Shop Press equipped with new 2-Speed Hand pump.

Now, a new version of the famous Rodgers "Sixty" 60 Ton Shop Press in two standard sizes, 60 and 80 Tons . . . designed and made for practical, versatile use throughout industry to save time, labor and money . . . operated by either hand or power pump . . . Fast arbor press action eliminates need for separate arbor press . . . an ideal light duty shop press for scores of miscellaneous jobs. Other Rodgers standard shop presses are available in capacities up to 400 tons.

Send for NEW Catalog giving full details and specifications on Rodgers 60-80 Ton Shop Presses. Ask for Catalog No. 312.

Rodgers Hydraulic, Inc.
HYDRAULIC POWER EQUIPMENT
7425 WALKER ST., ST. LOUIS PARK, MINNEAPOLIS 16, MINN.

Mention Item NED-4583 when writing

EXCLUSIVE CAGE DESIGN assures permanent alignment of rollers!

ORANGE Cage Type NEEDLE BEARINGS

The Orange cage design holds rollers in permanent alignment, preventing skewing. Internal clearances can be accurately controlled to meet exacting requirements, which especially adapts them to high speed and spindle applications. Cage of anti-friction, non-ferrous metal, has pockets coined to contour of rollers. Orange Cage type Needle Bearings have less internal friction, are smoother running, have longer life hours expectancy. Learn more about these unusual bearings.

IDEAL FOR
- Vertical applications
- Spindles
- High speeds
- Overhung mountings as well as
- All conventional uses

Write for Engineering Data Book showing construction, advantages, sizes, capacities, etc.

ORANGE ROLLER BEARING CO., Inc.
568 Main St., Orange, N. J.

Mention Item NED-4584 when writing

VICKERS Hydraulic POWER UNITS

Simplify Hydraulic System Design
Save Space
Reduce Costs

Available in several sizes with many different Vickers Pump combinations and electric motor arrangements, this self-contained hydraulic power unit meets a wide variety of industrial machinery requirements.

All necessary accessories are included; oil filters, strainers, oil level gage and pipe fittings, etc., complete and ready for connection to a machine hydraulic system.

Ask for Bulletin 46-43a

VICKERS Incorporated
Division of The Sperry Corporation
1456 OAKMAN BLVD. • DETROIT 32, MICH.

Mention Item NED-4585 when writing

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WIPE WELD SPATTER CLEAN

1. Brush or spray Protect-O-Metal in weld seam and on adjacent metal.
2. Weld
3. Simply wipe off spatter with a dry cloth.

Save Up To 85% of Weld Cleaning Labor

Unretouched photo shows how quick weld spatter "comes clean" when you paint or spray Protect-O-Metal No. 2 before welding. Spatter comes off in a *fraction of the time* and for a *fraction of the expense* of ordinary methods. No profit-wasting work with air chisels, wire brushing, or sand blasting. Get smooth, clean surfaces ready for painting if necessary . . . Unlike all other "spatter-proofing" compounds, Protect-O-Metal No. 2 contains no oils or organic ingredients, will not cause smoke, fumes, or odors. One coat serves for single or multi-pass welds, costs about a tenth of a cent per foot of weld, *saves up to three times its cost in time savings alone.*

PROTECT-O-METAL No. 2
G. W. Smith & Sons, Inc.
5402 Kemp Road, Dayton 2, Ohio

ORDER A TRIAL GALLON ($3.15) for testing in your plant. Your money back if compound does not prove entirely satisfactory.

Mention Item NED-4587 when writing

Handle BARRELS and DRUMS the Modern Way--use the SABIN TRUCK

A One-Man truck that pays off in *labor saving* and *increased handling efficiency.*

Weights up to 800 pounds are easily picked up by simply rolling truck up to container, hooking on at top and pulling back on handle. No *helpers needed.* Roller bearings make load moving easy, too.

WRITE FOR BULLETIN No. 48-A

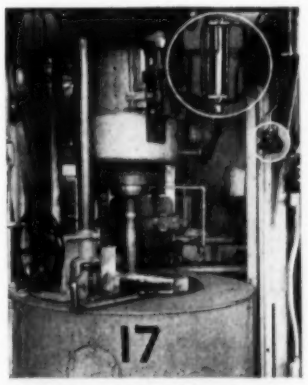
The Sabin Machine Co.
6536 Carnegie Ave.
Cleveland 3, Ohio

PRICE $39.50 with Semi-Steel Roller Bearing Wheels.

Price includes Exclusive Third Wheel Feature which insures better balance and added safety in moving loads.

ALSO TOTE PAN, BOX, CARBOY, KEG TRUCKS!

Mention Item NED-4588 when writing



• Close-up view of "Centrifugal" shows NOPAK Air Cylinder which operates feed-pipe gate, and NOPAK 4-Way Valve.

60 Pound Manual Lifts Eliminated on 17 Centrifugals at Holly Sugar Co.

A battery of 17 Roberts semi-automatic "Centrifugals" are employed in this modern plant to spin molasses off the sugar crystals. To simplify the task of charging each centrifugal, the feed-pipe gate... which formerly required an awkward manual lift up to 60 lbs. every 4 to 6 minutes . . . is now raised by the flick of a NOPAK Valve lever which controls a NOPAK Model E 4" x 13" air cylinder.

In a normal day, over 1600 manual lifts are eliminated; strain and fatigue are greatly reduced; machine efficiency is maintained at a high level. NOPAK Valves and Cylinders can help you achieve higher efficiency in your plant or in your product.

GALLAND-HENNING MFG. CO., 2755 S. 31st Street, Milwaukee 7, Wis.

WRITE FOR NOPAK APPLICATION MANUAL

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 5491-1/9AA

Mention Item NED-4586 when writing

STOP LEAKS in any type ROOF with STONHARD ROOF RESURFACERS

No need to rip up your old roof, or relay an expensive new roof — Any maintenance man can do a perfect job of repairing or resurfacing your roof by simply brushing or trowelling on either the Liquid or Plastic Roof Resurfacer over the old surface. STONHARD ROOF RESURFACERS *stop* leaks and *prevent* future leaks in any type roof—tin, iron, concrete, slag, gravel, tar paper or felt.

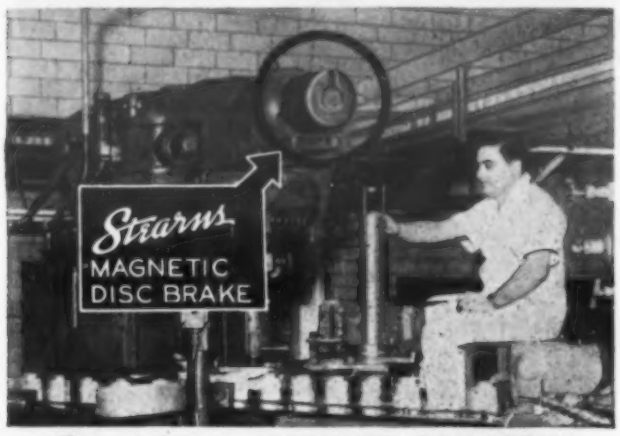
STONHARD COMPANY
Building Maintenance Materials
101 Stonhard Building, 1306 Spring Garden Street
Philadelphia 23, Pa.

Send for FREE Folder

STONHARD COMPANY (ATTACH TO LETTERHEAD)
101 Stonhard Building, 1306 Spring Garden Street
Philadelphia 23, Pa.

Firm .....
Address .....
City ..... Zone..... State.....

Mention Item NED-4589 when writing



Watchdog AT BLATZ BREWERY!

Canning 328,000 cans of beer per day requires a smooth, even operation at the Blatz Brewery in Milwaukee. *Stearns Magnetic Disc Brakes* are an integral part of their modern equipment to quickly stop the process in case of jamming and miscapping. Install *Stearns Magnetic Brakes* and *Clutch-Brake* units for smooth, dependable starts and stops.

Write for Bulletin 604E.

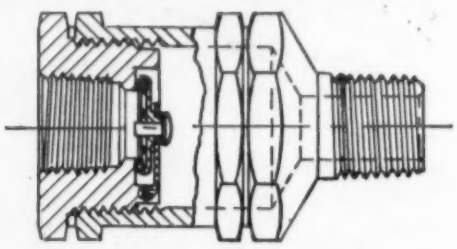
A. C. or D. C. Magnetic Brakes for motor or machine mounting.

Stearns MAGNETIC MANUFACTURING CO.

653 S. 28th St., Milwaukee 4, Wis.

▲ Mention Item NED-4590 when writing ▲

CAN YOU USE THIS Z & W CHECK VALVE?



1. A positive seal even under extremely low pressures, because of unique swing check action.
2. Full flow due to the ability of action to swing entirely out of flow of material being passed.
3. Disc equipped with special oil-resistant synthetic rubber, that will neither swell, wrinkle or shrink in gasoline or oil service.
4. Made in ⅛" and ¼" pipe threads in aluminum. Also available in larger sizes and other materials upon quotation.

Our craftsmen can also furnish you with superior screw machine work in sizes from 1/32" through 3-1/2" in diameter.

When in Cleveland, visit us and be convinced that we maintain the finest screw machine plant east of the Mississippi.

Call ENdicott 1991

Z&W MACHINE PRODUCTS, INC.

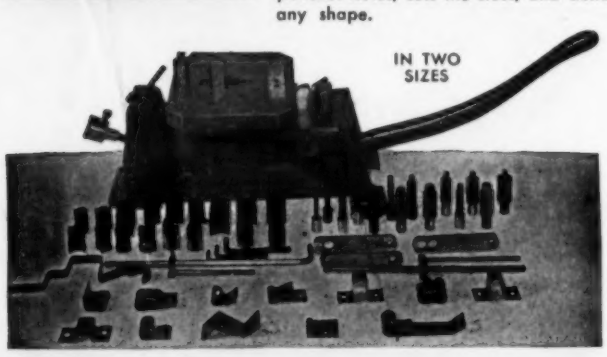
5151 ST. CLAIR AVE. CLEVELAND 14, OHIO

▲ Mention Item NED-4591 when writing ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. This efficient machine is useful in all lines of trade for production, experimental, and sample work. Short runs up to "5000." It punches holes, cuts the steel, and bends any shape.



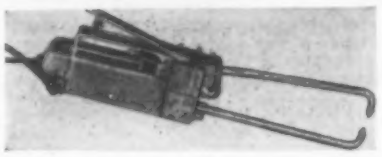
FIVE-IN-ONE-TOOL

IT BENDS FLAT AND TUBULAR STOCK INTO ANY SHAPE. CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO., 905 NORTH PITCHER ST. KALAMAZOO 60F, MICH.

▲ Mention Item NED-4592 when writing ▲

PORTABLE SPOT WELDER



Capable of welding up to ⅛-inch combined thickness of metal, Underwriters' Laboratories approved portable and self-operating spot welder can be used for welding window frames, skylights, display signs, wire fences, blowers and ventilating systems. Unit is enclosed in compact noncorrosive cast aluminum casing with integral handle for easy carrying. Protruding copper arms are available in lengths of 6, 12 and 18 inches, and replaceable alloy tips can be obtained for various shapes and specific needs. Each unit has silicon steel and copper transformer wound with burnoutproof spun glass insulated magnet wire to assure high heat conductivity. Welder can be obtained for either 110 or 220-volt operation and is supplied with 10 feet of cable. Made by **Greyhound A. C. Arc Welder Corp.,** Dept. NED, 604 Johnson Ave., Brooklyn 6, N. Y.

▲ Mention Item NED-4593 when writing ▲

ELECTRIC ADHESIVE TAPE

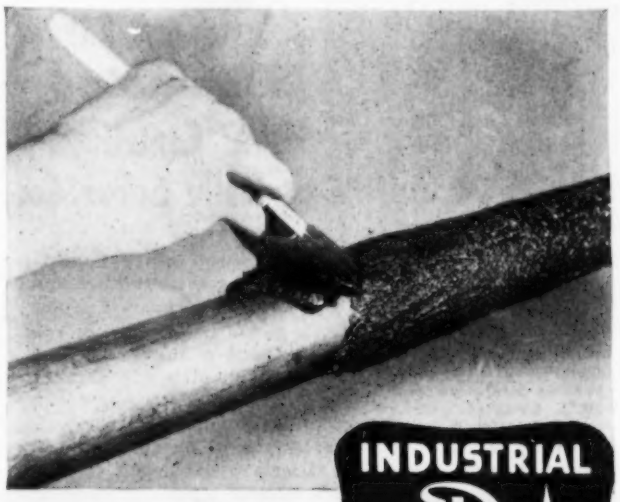
Bulk-free insulation and thinness is feature of this No. 163 electrical adhesive tape which has 2000-volt dielectric strength. Providing good moisture barrier, tape has high tensile strength and tack. It is easily unwound, is nonfraying and sticks firmly to any clean dry surface. Made by **Bauer & Black,** Industrial Adhesive Tape Dept. F, 2502 So. Dearborn St., Chicago 16, Ill.

▲ Mention Item NED-4594 when writing ▲

THICKNESS GAGE

Capable of continuously measuring thickness of sheet materials moving along conveyor without contacting or disturbing material, Beta-Ray thickness gage measures amount of beta-rays which are absorbed by sheet material being checked. By measuring absorption, device actually indicates mass per unit area of material under test; but it can be calibrated in terms of thickness to help operators maintain product uniformity, reduce amount of rejected material and save on amount of raw material used. Operating on 100 to 125-volt 60-cycle current, gage consumes about 150 watts. Accuracy is plus or minus 2 per cent or better between normal periods of calibration, while drift is not more than 1 per cent per hour after 30-minute warm-up period. Under normal conditions, calibration need not be made oftener than once every 4 hours. Made by **General Electric Co.,** Special Products Div., Schenectady 5, N. Y.

▲ Mention Item NED-4595 when writing ▲



INDUSTRIAL NoDrip

COVER PIPES TANKS, WALLS

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, *STOPS CONDENSATION DRIP.*

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

TRY NoDRIP—Apply NoDrip to a small area, compare the results with uncovered portions

Send for NoDrip Handbook

J. W. MORTELL CO.

526 BURCH ST. KANKAKEE, ILL.

▲ Mention Item NED-4596 when writing ▲

Finer Engineering means Faster Surfacing with . . .

VAN DORN SANDERS!

From switch to spindle, powerful Van Dorn Electric Sanders are built to take it! Motor, gears, bearings, spindle, all are built for years of productive service on the toughest surfacing jobs. And Van Dorn Sanders are so versatile they'll speed up job after job in your plant—from sanding any surface or grinding down welds to removing rust or shaping lumber. See your nearby Van Dorn Distributor for details. Write for free catalog to: The Van Dorn Electric Tool Co., 762 Joppa Road, Towson 4, Md.

For Power Specify "Van Dorn"

(Div. of Black & Decker Mfg. Co.)

Portable Electric TOOLS

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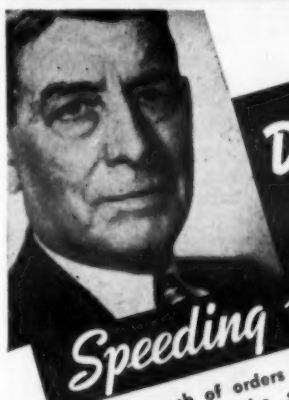

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